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ABSTRACT

This report examines how communities and groups can shape the content of health services to bring more comprehensive health services to poor children and families. The report is based on a study of 11 comprehensive primary care programs and systems some of which offer school-based services: 4 freestanding community-based programs, 4 local systems or networks, and 3 state maternal and child health programs. Suggested actions include promoting attributes of quality in primary health care programs by improving accessibility, comprehensiveness, coordination with other services and agencies, accountability, and community orientation. The report also advocates restructuring health programs to meet the needs of children by organizing health care systems to respond to changing needs, incorporating case management or care coordination, and involving hospitals in local systems. In addition, the report argues for creating new comprehensive primary care systems that respond to community needs through national health care reform, state policies and programs, and expansion of promising local efforts. The challenge is to create many partnerships that can assess possibilities for local systems development, identify needs and services, and implement the needed changes. Appendixes contain a list of project participants and the case summaries. A glossary is included. (Contains 46 references.) (JB)

ED 361 443

# Comprehensive Health Care Strategies for Young Children in Poverty

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# National Center for Children in Poverty

Judith E. Jones, *Director*

The National Center for Children in Poverty (NCCP) was established in 1989 at the School of Public Health, Columbia University. Its mission is to strengthen programs and policies for children under six and their families who live in poverty in the United States, and to heighten awareness of the needs and opportunities in early intervention for young children. The Center seeks to achieve its goals through interdisciplinary analysis and dissemination of information about public and private initiatives in the areas of early childhood care and education, maternal and child health, and the integration of services for young children and their families. The Center gratefully acknowledges the generosity of the Ford Foundation and the Carnegie Corporation of New York for the Center's core support which makes the publications program possible; this monograph does not necessarily reflect the foundations' views. The Center also acknowledges support for the comprehensive health care project from the Maternal and Child Health Bureau, U.S. Department of Health and Human Services.

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# CARING PRESCRIPTIONS:

## Comprehensive Health Care Strategies for Young Children in Poverty

by Karen N. Bell and Linda S. Simkin

**Karen N. Bell** is the Center's Associate Director for Maternal and Child Health. Much of her health care program and policy work has involved analyses of manpower, training, and organizational issues, both domestic and in developing countries. After earning a master's of public health degree from Columbia University, she spent eight years at the National Research Council directing health policy studies and managing a program in international collaborative health services research. She is currently directing a project to assist local ecumenical organizations improve access to health care for young children in poor families.

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# Highlights

Young children are currently the largest segment of the U.S. population who have no health insurance, and many of these young children live in low-income families. Providing preventive and curative health services to these young children, despite their health insurance status, is one of our nation's highest priorities.

Increasing low-income families' access to primary health care can help prevent disease and suffering among young children living in poverty, and it can minimize the developmental delay caused by untreated medical conditions. In the long term, a broader provision of comprehensive health services to poor and near-poor families will lower the costs to our society associated with treating neglected conditions and disabilities, or dealing with the outcomes of these problems.

This report, based on a study of eleven comprehensive primary care programs and systems—some statewide, some local—suggests that communities and groups can take many actions to shape the content of health services and the way they are delivered. Highlights of these approaches, drawn from experiences in several localities, concentrate on bringing into the health system families who have heretofore either been denied access or treated sporadically in hospital emergency rooms.

The strategies proposed—for adoption by interested community and state agencies or coalitions of health providers—would go a long way toward responding to the health problems that burden our nation's poorest families. These problems pose a constant threat to the more than five million children under six who live in poverty. National health care reform may make many of the program approaches described here easier to finance and implement, provided that the underlying principles assure comprehensive services to infants and children who are at high social as well as medical risk.

Suggested actions include promoting attributes of quality in primary health care programs; restructuring health programs to meet the needs of children; and creating new comprehensive primary care systems that respond to community needs.

The challenge facing communities all over the nation is how to create stronger federal/state/local partnerships that can meet the needs of poor families with young children. Creative federal systems reorganization will be called on to facilitate linkages between health care providers and other organizations serving children and families. State health departments must be strengthened to provide effective leadership concerning the oversight and monitoring of the health care infrastructure and access to services. Lastly, private and voluntary organizations can work with all levels of government to shape and improve the programs that serve our neediest infants and children.

## Promote Attributes of Quality in Primary Care Programs:

### Accessibility

- Offer services that are convenient for low-income families to use.
- Market primary care services to all community groups.
- Make health care affordable.
- Make Medicaid participation more attractive for providers.
- Reduce structural barriers to access.

### Comprehensiveness

- Make comprehensive health services available through a single entry point.
- Create systems for channeling needed services to high-risk parents and children. Systems should include:
    - Risk assessment
    - Case management
    - Multidisciplinary teams
    - Home visits
- Enhance the content of support services, including:
    - Social and mental health services
    - Nutrition services
    - Parent education and support
- Establish linkages with emergency, inpatient, and subspecialty care providers.

### Coordination

- Offer care coordination as a Medicaid service.
- Promote care coordination as part of "managed care."
- Integrate health, social, and patient support services.

### Continuity of Care

- Ensure that children have a regular source of ongoing care.
- Provide prenatal care and follow-up after birth.
- Ensure that children see the same medical practitioner at each visit.
- Use record-keeping systems that promote continuity.
- Create financing mechanisms that facilitate continuous eligibility.

### Accountability

- Strengthen management information systems.
- Establish quality standards and monitor compliance.
- Set specific objectives regarding staff performance.
- Train and retrain staff.

### Community Orientation

- Determine community needs.
- Market and orient services to the community.
- Assess the impact of the program on the community.

## Restructure Health Programs to Meet the Needs of Children:

- Organize local health care systems to respond to changing needs.
- Incorporate case management or care coordination.
- Involve hospitals in local systems.

## Implement Strategies to Develop Comprehensive Primary Care Systems

**National Health Care Reform**

- Assure universal financial access to comprehensive personal health services.
- Simplify and revise administrative procedures to reward efficient, consumer-oriented systems of care.
- Expand health care infrastructures to cover all underserved populations.
- Strengthen public health agency roles in the planning, delivery, and monitoring of health status and services for mothers and children.

**State Policies and Programs**

- Strengthen the roles of state health departments.
- Use Medicaid effectively for children in poor families.

**Expansion of Promising Local Efforts**

- Build coalitions within the community.
- Strive for institutional change and commitment.
- Seek win-win arrangements between organizations.
- Emphasize quality in managed care programs.
- Apply lessons from prenatal care to child health care.
- Expand local system capacity.

## Conclusion

The challenge is to create the many partnerships that can assess possibilities for local systems development, identify needs and services, and implement the needed changes. National health care reform may resolve financial access barriers, but issues will remain concerning administrative complexity, institutional rigidity, duplication of services, lack of infrastructure, and an inadequate supply of service providers. Human services and religious organizations, voluntary agencies, hospitals, health professional associations, independent practitioners, the media, and child advocacy groups will have to work together with government agencies to fulfill a broad vision of health and equity for disadvantaged young children and families.

Community Oriented Primary Care Program, Dallas, Texas

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# Acknowledgments

The goal of this project was to illuminate the role that comprehensive primary health care can play in improving the health and development of infants and young children living in poverty. Funding for the project came from three generous sources, which we wish to acknowledge with our sincere thanks: the Maternal and Child Health Bureau of the Public Health Service, U.S. Department of Health and Human Services, which provided a grant for site visits, a December 1991 project seminar in Washington, D.C., and report development and preparation; and the Ford Foundation and the Carnegie Corporation of New York, which contributed through their core funding to the National Center for Children in Poverty (NCCP).

The report aims to assist state and local health care providers, and social services agencies and child care organizations, as well as the many national and state policymakers engaged in health care reform, in their continued efforts to ensure quality services for those young children in the United States who are growing up poor.

NCCP began exploring the health problems of disadvantaged infants and young children by publishing a report in 1991, *Alive and Well? A Research and Policy Review of Health Programs for Poor Young Children* by Lorraine V. Klerman, Dr. P.H. The report confirmed the deleterious impact of poverty on child health, and described federal programs that have improved health outcomes for poor children. The report also suggested broad policy and programmatic strategies that could improve the health status of infants and children from low-income families.

To further determine how health service programs can be altered to improve child health outcomes, the Center brought together a steering committee, whose contributions to this project have been considerable. We wish to thank the following individuals, who served as members of this group, and who participated actively in the seminar: Rosemary Barber-Madden, Fernando A. Guerra, Maxine Hayes, Lorraine V. Klerman, Linda Randolph, Sara Rosenbaum, Ed Rushton, Sarah Shuptrine, and Deborah Klein Walker.

We especially wish to thank the program directors who worked hard to prepare case summaries of programs they presented at the project seminar: Peggy Balla, Judith Barber, Maura Bluestone, Gail F. Breakey, Doane Fischer, Marie Meglen, William P. Quinn, Lucille Rosenbluth, Stephen Rosser, Aaron Shirley, and David R. Smith. Their case summaries are featured in Appendix B.

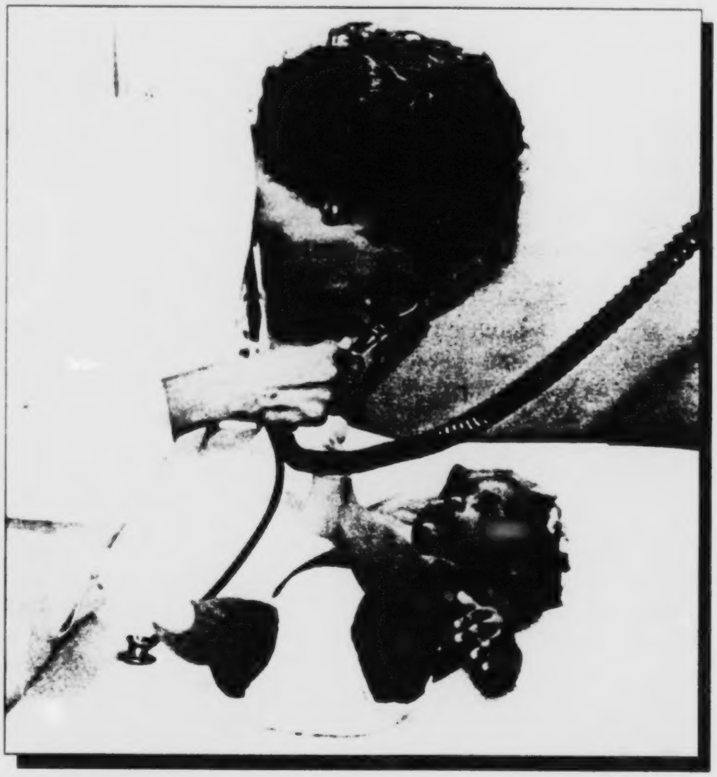
Several other individuals contributed their time and energy in significant ways to direct the seminar discussions toward those issues that impact most heavily on access to quality health care for young children in poverty. Maxine Hayes did a superb job as seminar chair. Lorraine V. Klerman presented an enlightening paper entitled "Factors That Influence Child Health: The Role of Comprehensive Primary Health Care." Catherine A. Hess presented a thorough analysis of "The Past, Present, and Future of the Title V MCH Program in Developing Comprehensive Services for Children." Sara Rosenbaum and Sarah Brown each commented on the effect of federal health care financing reforms on maternal and child health concerns, and Richard Telkamp presented an inspiring account of institutional changes within the Greenville, South Carolina, hospital system. Patricia M. Taggart described prepaid programs in Minnesota. Sarah Shuptrine traveled to Mississippi and Dallas with Karen Bell to visit the programs featured in case summaries, sharing generously the strategic lessons learned from crafting maternal and child health policy and program reforms in South Carolina.

Other participants who attended the project seminar provided invaluable assistance through presentations and detailed discussions of strategies for improving comprehensive primary care systems and quality services for children—and of barriers standing in the way of change. We wish to thank these individuals for

their time, efforts, and commitment to these issues: Megan D. Berryhill, Preston Boggess, James T. (Terry) Bond, Elizabeth Brannon, William Deck, Diana M. Gurieva, David Heppel, Vince Hutchins, Jason Juffras, Jill Kagan, Samuel Kessel, Jane Koppelman, Katherine McDermott, Pat McGuckin, Helen Rodriguez-Trias, Allan Rosenfield, Ann Segal, Phyllis Stubbs, Gladys Wong, and Lee Zacharias. See Appendix A for the affiliations and addresses of all seminar participants.

We wish to thank Beth Atkins, the Center's director of publications, for her valuable suggestions at every stage in the shaping of the report, and for her multiple editorial contributions. We are especially grateful to Judith Jones, the Center's director, who generously shared her insights and knowledge, and who encouraged us in the early planning stages, as well as throughout the project.

This report is based on the information presented and discussed at the seminar, on site visits and correspondence with the steering committee members and seminar participants, and on previously published and unpublished documents about the problems experienced by health care programs serving low-income families. See References and Appendix B—Case Summaries.



Harlem Hospital Pediatric Resource Center, New York City

Barbara Docktor

# Introduction

Infants and children from poor families in the United States do not receive adequate primary health care. The most visible and concentrated examples of the lack of access to appropriate health care occur in our most vulnerable communities and among special groups of children: the homeless; the inner-city poor; children in foster care; and children of rural migrant workers, recent immigrants, and residents of rural areas in the deep South and Appalachia.

The proportion of children uninsured for at least part of the year has reached more than 20 percent, despite the expansion of Medicaid eligibility.[1] Most poor and near-poor U.S. families experience difficulties obtaining quality primary health care for their children.[2] Even when poor families find doctors willing to care for their infants, the available services may not be appropriate to these families' needs.[3] Hospital outpatient departments and public health clinics, which provide care to many Medicaid patients, frequently have inconvenient hours and long waiting times, and categorical eligibility and administrative complexity have created significant barriers to timely care.

Comprehensive health care for infants and children from poor families can contribute in significant ways to treating and preventing problems that would otherwise lead to lags in development, learning difficulties, and reduced school attendance. Quality services involve parents or caregivers and educate them about risks to their children. They actively reach out to families who may not bring their children to the clinic for checkups. They support parents in managing their children's health needs, from obtaining required immunizations to diagnosing and treating a condition that may lead to disability, and to coordinating special medical and support services that improve functioning and well-being of children with chronic illnesses and disabilities. Local systems of quality health care may even respond to risks in the community that go beyond a narrowly defined mandate to environmental pollution, to family violence, to substandard housing, and to substance abuse.

Programs that seek to deliver quality, comprehensive services to children living in poverty operate under a variety of public and private auspices at the national, state, and local levels. Much can be learned from the strategies these programs use to deliver appropriate care, as well as from the remaining barriers that prevent them from serving as many children as they would like. Some progress has been achieved in reducing national and state health care financing inadequacies, but at the local level, lack of sufficient primary care providers and cumbersome organizational arrangements are still significant.

The aims of the project reported on here were as follows:

- To identify major elements of quality for comprehensive service systems
- To describe the extent to which selected state and local programs incorporate each of these quality elements
- To consider the wider applicability of strategies for developing comprehensive, community-oriented primary care programs

Project staff sought examples of ongoing programs that could guide the development or restructuring of state and local child health programs. The experiences that public agencies and private organizations have had, working with local and state groups, reveal that more information is needed about how to implement community-based solutions for improving the health of poor children.[4]

To help highlight the best practices of comprehensive health programs for disadvantaged families with young children, and to learn more about adapting them to other communities, the authors worked with a broadly representative steering committee (see Appendix A) to identify strategies that assure quality within a variety of settings. To help choose among the many programs currently in operation, the group endorsed the following criteria—

**Comprehensive health care for infants and children from poor families can contribute in significant ways to treating and preventing problems that would otherwise lead to lags in development, learning difficulties, and reduced school attendance.**

while simultaneously cautioning against featuring as exemplary models any programs that have not been evaluated:

- The services should be comprehensive and meet a wide range of family needs, as described in the 1981 report of the Select Panel for the Promotion of Child Health.[5]
- The system should be accessible to low-income families and have a capacity for outreach.
- The system should work to assure continuity of care through coordination and integration of preventive, primary, secondary, and specialty levels of care.
- Personnel arrangements should be appropriate for the level of medical and environmental risks of the patient populations
- The program should be subject to periodic quality assurance reviews.
- The program should promote consumer participation and partnership with parents.

The programs described in this document illustrate a range of settings, types of institutional sponsors, and organizational approaches for assuring access to primary care for high-risk infants and children. They do not, of course, constitute the only examples of quality comprehensive primary care programs in the country. They are simply representative.

The accounts of the origins and early experiences of these programs, and of their continuing struggles, reinforce the fact that the implementation of all national and state policies takes place at the local level. These programs encompass a wide array of financing and organizational strategies for meeting community needs, addressing new social and medical challenges, and filling gaps left by other health care providers. Their visions for creating a system of care for all families suggest the possibilities that lie ahead for health care reform. Their experiences can inform other state and local efforts, although the replication of an entire program is generally not feasible.

Despite the inadequacies of Medicaid for meeting the needs of the poor and uninsured, and the urgency of calls for national health care reform, federal legislation passed since 1985 offers opportunities to build comprehensive systems of child health care with Medicaid financing.[6] Expansions in Medicaid eligibility, coupled with the 1989 Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) reforms, have improved access to primary care for many poor children. Some states have chosen to provide a broad scope of family support and case management services, using a combination of Medicaid and other federal and state funding, and taking full advantage of the authority that allows them to design special services for children and to develop coordination mechanisms for linking preventive and primary care with specialty and support services.[7] By contrast, most of the risk-based national health insurance reform proposals incorporate few of the services that poor mothers, their infants, and young children routinely need.[8] Some of the programs reviewed in this report have taken advantage of, or are planning to use, funding made available through these federal and state Medicaid expansions and reforms.

The programs reviewed in the project are listed below and described briefly on pages 13–18. Full case summaries of the programs appear in Appendix B.

**Freestanding Community-based Programs:**

- **Jackson-Hinds Comprehensive Health Center, Jackson, Mississippi**
- **West Dallas Children and Youth Project, Dallas, Texas**
- **Family Care Center, Lexington, Kentucky**
- **Brennan's Health Connection, New Haven, Connecticut**

**Local Systems or Networks:**

- **The Bronx Health Plan, The Bronx, New York**
- **Community Oriented Primary Care Program, Dallas, Texas**
- **Comprehensive Health Investment Project, Roanoke, Virginia**
- **Pediatric Resource Centers, New York, New York**

**State Maternal and Child Health Programs:**

- **Hawaii: Healthy Start–Family Support Services Program**
- **Mississippi: Perinatal High Risk Management/Infant Services System**
- **South Carolina: Comprehensive Health Care System for Infants and Children**

## FREESTANDING COMMUNITY-BASED PROGRAMS

### Jackson-Hinds Comprehensive Health Center
### Jackson, Mississippi

The Jackson-Hinds Comprehensive Health Center, a community-based primary care program, is proud of its accomplishments in meeting the medical and mental health needs of the Jackson, Mississippi, metropolitan area over the past 20 years. The Center's goals and objectives focus on seven priority areas—infant mortality, teenage pregnancy, immunization, AIDS, preventive health, life expectancy, and dental health. In response to the findings of a needs assessment concerning conditions leading to morbidity and premature death, the Center's program is characterized by aggressive outreach, community health education, and enhanced access to sensitive primary health care services. To reach high-risk students, Jackson-Hinds has established primary health care clinics in four senior high schools, four junior high schools, and one elementary school in the city of Jackson and rural Hinds County.

Positive relationships with state and local agencies, built over the years, have resulted in linkages ensuring that patients have access to a comprehensive array of services. For example, Center patients deliver their babies at Mississippi Baptist Medical Center and the University Medical Center. Jackson-Hinds uses prenatal and postnatal risk assessments to channel mothers and infants into enriched service programs. It has an arrangement with the Mississippi Department of Health for on-site certification for the Special Supplemental Food Program for Women, Infants, and Children (WIC), and the rural satellite clinic is a food distribution site. A Medicaid eligibility worker, outstationed by the public welfare department, assists patients to complete the application process.

The Center's active social service component assures clinic patients' access to needed services. Social workers know the services available in the community and frequently act as brokers, helping patients secure appointments and transportation. The U.S. Public Health Service and Medicaid are the Center's primary funding sources.

### West Dallas Children and Youth Project
### Dallas, Texas

The Dallas Children and Youth (C&Y) Project began as a Title V–funded project (see Glossary) at the University of Texas Southwestern Medical School in 1967, to demonstrate health care delivery to underserved populations. In 1989, it became the first clinical service component of the Community Oriented Primary Care Program.* The C&Y Project estimates that over 80 percent of children ages 0–18 living in West Dallas are registered clinic patients.

Clinics are co-located at two elementary schools and one high school, making services very accessible and enhancing cooperation with the Dallas Independent School District. An interdisciplinary team consisting of a physician, one or two midlevel practitioners, a social worker, a case aide, a medical assistant, and clerical support staff provide services. Linkages are well established with Parkland Memorial Hospital, Children's Medical Center, and over 60 health care and community service organizations. The clinics are open five days a week from 8 a.m. to 5 p.m., with limited evening hours two days a week. Although the schools close for the summer, clinics remain open.

### Family Care Center
### Lexington, Kentucky

Health care is only one of the multiple services the Family Care Center provides in a single setting. Under the auspices of the Lexington-Fayette Urban County Government, the Center was established to provide three programs to low-income families with preschool children—health care for children, developmental day care, and educational services for parents. In this context, the health services are one of a set of co-located, interdisciplinary services designed to help clients become self-sufficient.

Medicaid and a Healthy Tomorrows (see Glossary) grant enable the program to extend a wide array of primary health care

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** This project was studied separately from the Dallas Community Oriented Primary Care (COPC) Program, described later in this section, because it functioned independently for nearly 20 years and developed many of the practices and staffing patterns adopted subsequently by the COPC.*

services to more than 750 children. The Center's clinic staff consists of the medical director, a nurse manager, a pediatric nurse practitioner, and seven physician residents from the University of Kentucky Medical Center. Linkages to the medical center promote access, continuity, and comprehensiveness. Emergency care, hospital care, and subspecialty care are all provided there, where the medical director has a staff appointment. Clients also have access to a drug and alcohol program through the University of Kentucky Mental Health Programs.

### Brennan's Health Connection
### New Haven, Connecticut

Brennan's Health Connection is an investment in the capacity of New Haven parents to shape a better future for their children. The clinic, housed in an elementary school located in a medically underserved area, promotes access to comprehensive health care. Both acute care and preventive health services, including immunization, are provided. The clinic population is drawn from three public housing projects. Funding from a federal Healthy Tomorrows grant has enabled a full-time pediatric nurse practitioner to staff the clinic. A pediatrician and social work consultant serve on-site for several hours each week, and are available by phone at other times. The school clinic is linked to a community health center and a center for social and psychological evaluation. In addition to the 460 students (grades K–6) who attend the school, the clinic serves Head Start children (ages 3–5), and infants and toddlers living in the neighborhood.

## LOCAL SYSTEMS OR NETWORKS

### The Bronx Health Plan
### The Bronx, New York

The Bronx Health Plan (TBHP) is a managed care plan serving low-income individuals, of whom approximately one-third are children. The Plan began in 1982 as a planning initiative designed to stabilize funding and expand clinical responsibility for community health centers affiliated with Montefiore Medical Center. In 1986, the planning initiative was expanded to include health centers throughout the Bronx; in early 1987, the Plan began operations as an independent, not-for-profit corporation. Today, the Plan is a prepaid health services plan (HMO) licensed under Article 44 of New York State Public Health Law.

Clinical services are delivered through a contractor provider network of nine primary care practices, five voluntary hospitals, area municipal facilities, and over 150 physician specialists and other providers. The Plan is governed by a board of directors composed primarily of the directors of participating community health centers.

The Plan enrolls individuals eligible for state and/or federal public health insurance programs. The largest category, financed through Medicaid, includes Aid to Families with Dependent Children (AFDC) and Home Relief recipients in the Bronx. There are currently close to 14,000 Medicaid enrollees, with enrollment growing monthly. An additional 3,300 low-income individuals are enrolled in TBHP's state-subsidized programs for the uninsured.

Health centers are paid a capitated rate for each Plan member who selected that health center as his or her source for primary care; the capitation payment is provided whether or not the member uses the facility's services. The Plan assumes full financial risk for all services other than primary care.

Participation in the Plan is voluntary, but enrollees must select one of the participating health centers and use it exclusively for all covered services. Health centers offer some evening and weekend hours, and 24-hour telephone coverage. Plan enrollees receive a full range of preventive and medical services and have access to specialists in their private offices. Physicians, nurse practitioners, and physician's assistants provide clinical services.

### Community Oriented Primary Care Program
### Dallas, Texas

The mission of the Community Oriented Primary Care (COPC) Program in Dallas is to establish a community-based system of care to improve the health of medically underserved individuals through easily accessible primary care, health maintenance, and medical intervention. The concept promotes decentralization of care to counteract the movement of health care facilities and providers from neighborhoods to centralized medical centers.

COPC was established in 1989 to consolidate a fragmented array of health services. Community health centers now operated by Parkland Memorial Hospital's COPC include the West Dallas Children and Youth Project, the Oak Cliff Clinic, and the East Dallas Health Coalition. A new clinic in southern Dallas was constructed, in part, with savings generated as a result of program consolidation. In addition, COPC assumed operational responsibility for the Pediatric Primary Care Clinic and Young Adult Clinic within Parkland Hospital.

Over half of the 38,000 clients COPC serves annually are children. The Program blends traditional primary care with health education and public health services. Half of COPC physicians are pediatricians, and the Program relies heavily on the expertise of highly trained nursing staff and physician's assistants. The health care team also includes "nonreimbursable" health care professionals with expertise in responding to the needs of the target population—such as health educators, outreach workers, nutritionists, translators, psychologists, and social workers.

COPC is a component of the Dallas County hospital district and is governed by its board of managers. It receives approximately 56 percent of its funding through the ad valorem tax base; the remainder is derived from Medicaid, patient collections, and a variety of grants. COPC maintains close working relationships with the Dallas Independent School District and the child health services of the county health department.

## Comprehensive Health Investment Project
## Roanoke, Virginia

The Comprehensive Health Investment Project (CHIP) is a public/private partnership providing health care for 1,000 infants and children who live in the Roanoke Valley of Virginia. Every year since the beginning of the Project, the upper-age limit has been extended by one year so that children already enrolled do not lose their eligibility because of age. The upper-age limit is now nine years.

Comprehensive Health Investment Project, Roanoke, Virginia

CHIP was conceived in 1987 by local physicians and community leaders who shared concerns about the growing number of young children from poor families who did not have regular access to health care. The partnership was created to improve the well-being of children through a community-based system of primary care, case management, and family involvement. CHIP maximizes the use of existing resources, including local health departments, private practitioners, and public agencies. All children in CHIP are assigned a "medical home." Private physicians provide the routine well-child and acute care, and visits for non-Medicaid children are reimbursed at Medicaid rates with Title V funds. Children are also enrolled with a dentist. CHIP maintains linkages with local human service agencies and hospitals; however, the Project does not yet finance inpatient care. CHIP is a not-for-profit organization that receives funding from a combination of public and private sources.

Public health nurses assigned to each family play a pivotal case management and coordination role. A team consisting of a nurse and a family intervention specialist conducts an initial home visit and assesses child and family needs. Nurses assist families to make and keep appointments, and sometimes accompany patients. They also follow up to make sure that families understand directions and fill prescriptions. Family intervention specialists work with families of very young children in the areas of growth and development. Parent education classes, meetings, a toy lending library, and role-modeling help educate and support parents.

### Pediatric Resource Centers
### New York, New York

Significant population shifts, coupled with dwindling MCH Block Grant support for child health in New York City, led to a re-evaluation of pediatric health services in the mid-1980s. During this time, findings from a survey conducted by the Medical and Health Research Association (MHRA) indicated that 339,000 children in families with incomes under 185 percent of the federal poverty level lacked Medicaid coverage. In response, the city and state departments of health and the MHRA established the Pediatric Resource Centers (PRCs), modeled on successful elements of C&Y Projects. (See Glossary.) Services were targeted to those at highest risk of poor health outcomes, with eligibility based on specific health, social, and economic criteria.

Eight PRCs, of which five were previously C&Ys, operate in nine sites. Four sites are in municipal hospital outpatient departments; one is a community-based satellite of one of the municipal hospital PRCs; three are freestanding facilities under the auspices of voluntary teaching hospitals; and one is a freestanding community health center. During the 12-month period ending March 1992 a total of 29,591 patients received care at these PRCs.

The MCH Block Grant provides 28 percent of PRC program funding. Although earmarked for those indigent children who are uninsured, funds also cover non–Medicaid-reimbursed services for Medicaid-covered children. All preventive services—health maintenance, screening tests, and immunizations—are free of charge for all patients, regardless of age or income. Treatment services are provided on a sliding fee scale, with no fees for patients in families with incomes below 100 percent of poverty.

Interdisciplinary teams at each PRC offer, at a minimum, medical, nursing, social and family support, nutrition, vision, and speech and hearing services, and some have added parenting programs. Other diagnostic and treatment services, including mental health, dental, specialty, and inpatient services, are available by referral, usually to the parent agency.

Explicit, measurable goals, objectives, and performance standards have been established. Each year, MHRA evaluates each project to determine the extent to which it is reaching objectives related to accessibility, availability, accountability, continuity, and coordination. Data sources include the PRC Data Reporting System, site visits, chart reviews, and quarterly fiscal reports.

## STATE PROGRAMS

### Healthy Start–Family Support Services Program
### Hawaii

Hawaii's Healthy Start–Family Support Services Program, launched on a large scale in 1989, provides home visiting and family support services to families of newborns considered to be at high risk for abuse and neglect.* The Program is managed by several private agencies and monitored by the Maternal and Child Health Branch of the state health department and funded through direct state legislature appropriations. In 1991, $6.3 million was appropriated to screen 50 percent of births and provide home visitor services to 2,800 families and their children under five.

The Program offers home visits to families on a voluntary basis for up to five years. Family support workers (paraprofessionals) conduct home assessments, help resolve family crises, suggest appropriate parent-child interactions, identify

** The Hawaii program should not be confused with the federal Healthy Start grant program to reduce infant mortality. See Glossary.*

dangerous situations for children, and coordinate access to community resources. Although health care is not the hub of Healthy Start services, the Program identifies a medical home for each enrolled child and assures immunization by age two, a process helped by the state medical association's Physician Involvement Project. This awareness-building and training effort increases the pool of available primary practitioners.

Healthy Start supports the health department's efforts to create a comprehensive system of health services for high-risk, disadvantaged young children and their families. Another health department program provides perinatal outreach, through teams that provide health education and counseling to pregnant women at several sites. Zero to Three, under P.L. 99-457, provides services to children who are at risk because of environmental, biological, or developmental factors, or who are developmentally delayed. Another initiative is Baby Safe, a demonstration program for substance-involved pregnant women aimed at reducing or eliminating drug use. Health care from birth is covered by the Well Child Supervision Bill and by Medicaid. Hawaii's State Health Insurance Plan significantly increases financial access to health care by offering coverage to families up to 300 percent of the federal poverty level. The health department is working on a client tracking system to enhance care coordination and assure achievement of health care objectives.

## Perinatal High Risk Management/ Infant Services System

### Mississippi

The long-term goals of the Perinatal High Risk Management/Infant Services System (PHRM/ISS) are to improve birth outcomes and infant health by reducing the incidence of low birthweight; reduce neonatal intensive care costs; and lower infant mortality and morbidity by ensuring that high-risk pregnant women and infants receive early, continuous, comprehensive, and risk-appropriate health care. This program strives to remove obstacles to care through systemic change in response to consumers' experiences.

PHRM/ISS was designed by the state health department, which provides prenatal care to 54 percent of all women delivering in Mississippi. Modeled in part on South Carolina's High Risk Channeling Project (also featured in this report), the program takes advantage of the 1986 COBRA (Consolidated Omnibus Budget Reconciliation Act) Medicaid provisions for enriched services and targeted case management. Reimbursement rates are set by the state's Medicaid division in conjunction with the state health department, and payment for case management services can be made to both public and private agencies.

The target population is Medicaid-eligible high-risk pregnant women and infants through the first year of life. In the early years of the program, 30 percent of all screened pregnant women had identifiable risk factors, and 20 percent of infants born to Medicaid-eligible mothers were considered high-risk. By late 1991, 37 approved providers in 32 counties served 2,151 women with high-risk pregnancies and 597 high-risk infants.

Services include medical risk assessment, individualized case management and care coordination, psychosocial assessment and counseling, nutrition assessment and counseling, home visiting, health education, postpartum family planning services, transportation, and Medicaid enrollment assistance. An interdisciplinary team develops the family care plan and helps the family set priorities, works with the family, and reviews the plan monthly.

## Comprehensive Health Care System for Infants and Children

### South Carolina

In South Carolina, county health departments deliver much of the medical care received by low-income women and children. The objective of the High Risk Channeling Project (HRCP) is to decrease neonatal mortality in South Carolina. HRCP conducts risk assessments of all pregnant women with Medicaid coverage, ensures health care coverage for high-risk pregnant women and their infants through public and private cooperation, and provides case management for one year following birth. The Project has been implemented through a regional hospital and high-risk clinic system in all 13 of the state's regional health districts that oversee 46 county health departments. It operates under a waiver from the Health Care Financing Administration. Medicaid-reimbursable services through HRCP include prenatal medical care from an obstetrician, hospital delivery, social work assessment and treatment, nutrition assessment and treatment, prescribed medical and clinical encounters for infants, and medical management of the prenatal care plan with case management through pregnancy and one year after delivery.

Public/private partnerships are being developed throughout South Carolina to ensure that each child has a "medical home." Pediatric task forces are planned for each health district to identify unmet needs for health care, determine available resources, and work to create a system to improve access to preventive and primary care. Cooperation between the health department, the state's Medicaid agency, and the University of South Carolina School of Medicine has created a network of physicians to address the child health personnel shortage in three counties. The network has organized a pool of physicians to supply contracted services in underserved areas.

Public health department clinics provide a broad range of preventive and well-child care. Emphasis has been placed on home visiting, EPSDT services for Medicaid-eligible children, and early identification of children with disabilities through P.L. 99-457. Home visiting by registered nurses is available in many health departments for all Medicaid-enrolled mothers and their new infants. When problems arise, project personnel make referrals to community agencies. Case management is provided to all HRCP patients, sickle-cell patients, infants and children with special health care needs, and Medicaid-eligible pregnant women in 24 counties. Case management encourages families to take their children for EPSDT screenings and to ensure that they obtain follow-up diagnostic and treatment services. Finally, the health department is also seeking to improve immunization rates through increased coordination with WIC (see Glossary).

Healthy Start–Family Support Services Program, Hawaii

# Strategies for Achieving Quality in Primary Health Care Programs for Young Children in Poor Families

## THE ROLE OF PRIMARY HEALTH CARE

Primary health care should be a right of all young children, irrespective of their economic situation. Primary care services reduce a child's pain and suffering; they prevent unnecessary hospitalization, death, and disability. The health benefits of health care services for children increase when the content and organization of care are appropriate for the needs of their families. Quality health care should emphasize preventive as well as acute care, include instruction for parents and caregivers, and pay attention to family circumstances that pose risks to the physical health, mental health, and development of young children.

Improved health care for both mothers and children can result in healthier families as shown by traditional measures, such as morbidity, mortality, and service utilization. Examples might include lowered rates of vaccine-preventable illness; less hospitalization for injuries and preventable illnesses such as diarrhea, pneumonia, and asthma; and reduced usage of hospital emergency rooms for conditions that could be managed at home or by primary care physicians. Further reductions in infant mortality, however, may require comprehensive societal interventions that enhance the health status of young women and enable them to adopt healthy behaviors prior to and during pregnancy.

Comprehensive primary health care for young children in poor families might have an even larger impact on nontraditional measures of child health, such as those measured in the National Health Interview Surveys. Numbers of days missed from preschool, or days spent in bed, or days on which the child cannot play as usual could be reduced through improved caregiving and prompt medical attention.

Also, learning problems associated with lead exposure, chronic illness, child abuse and neglect, and low birthweight could be prevented or minimized during preschool years through continuous and comprehensive primary care.

Primary health care services can promote school readiness and better health outcomes for young children living in impoverished or stressful households when medical practitioners pay attention to prevention. However, many primary care providers cannot give low-income parents enough time—or link them to the supportive services they need. Primary health care physicians can better meet the needs of young children living in poverty by developing strong connections with a comprehensive range of services. Some public health analysts believe that preventive and curative care should be provided in the same location, especially for needy families.

Clinicians need more training in identifying parental drug and alcohol abuse, and detecting family violence. Home visits, case management, and community outreach activities help providers reach disadvantaged families and offer them continuous primary care. Primary care providers in poor neighborhoods should orient their services to the entire spectrum of health risks present in the community—going beyond the common clinical complaints of their patients.

**Primary health care should be a right of all young children, irrespective of their economic situation. Primary care services can reduce a child's pain and suffering; they can prevent unnecessary hospitalization, death, and disability.**

## ATTRIBUTES OF QUALITY IN PRIMARY CARE PROGRAMS

All families with infants and young children need primary health care. While scholars and practitioners agree that good care effectively prevents disease and reduces suffering, it also reduces the long-term costs to society associated with treating neglected problems and disabilities. Primary care that is appropriate, accessible, affordable, timely, and continuous also promotes the health and well-being that contribute to a child's success in school.

In 1981 the Select Panel for the Promotion of Child Health identified attributes of primary health care services for children that should be incorporated into programs serving vulnerable families. Other committees convened by the Institute of Medicine and the American Academy of Pediatrics have reaffirmed these, or similar, attributes.[9] The life circumstances of poor families pose great risks for infants and children, making these features desirable for the delivery of quality health care. Barbara Starfield, M.D., has elaborated still further the conceptual, research, program, and policy issues related to primary care in her recent book, *Primary Care: Concept, Evaluation, and Policy*, including a discussion of methods for measuring adequacy.[10]

In light of previous and ongoing work by others, the authors of this study created a framework of six basic elements of primary health care. They categorized activities and approaches used by each program reviewed in this project that correspond to each of the attributes listed below:

- Accessibility
- Comprehensiveness
- Coordination
- Continuity of care
- Accountability
- Community orientation

The following section of this report describes some of the strategies for achieving these attributes that are used by the programs reviewed for this project. The strategies described here are generally recognized as "good practice."[11] They are included, not because they are necessarily exemplary, but because they illustrate features of ambulatory care that promote better health outcomes. Some strategies, such as case management, advance more than one component of quality. "Strategy," in the context of this report, means an approach or activity that is, at least in part, recognizable, describable, replicable, or quantifiable.

### Accessibility

Financial, structural, and cultural barriers to obtaining primary health care can compromise the health and well-being of infants and young children. Access barriers can also lead to measles outbreaks, unnecessary hospitalizations, and emergency room visits for primary care—all of which increase costs to families and communities. Strategies that communities can employ to reduce access barriers include the following:

> **While scholars and practitioners agree that good care effectively prevents disease and reduces suffering, it also reduces the long-term costs to society associated with treating neglected problems and disabilities.**

#### ■ Offer services that are convenient for low-income families to use.

**Location.** Families with young children should not have to travel far to obtain primary health care. Unfortunately, many health care providers have left low-income neighborhoods and rural areas for the suburbs or major medical centers. David Smith, the Texas health commissioner, characterizes the migration of health care services away from communities to medical centers and hospitals as a process of "involution." He notes that over recent decades, the centralization of medical services around large institutions has had negative effects on the ability of low-income families with children to gain access to primary care.

The location of a clinic in the neighborhood or community can promote health care utilization. This principle is self-evident, but national, state, and local health planning has not always led to site placements based on need. The Dallas COPC Program undertook an extensive needs assessment process to ensure that health clinics were situated in areas of greatest need.

Some programs take services to the community by basing them in clinics located in or in close proximity to elementary, junior, and/or senior high schools.* School-based clinics for young children are operated in New Haven and by COPC and the Jackson-Hinds Comprehensive

** School-based clinics are located within or near school settings and operate collaboratively with school administrations.*

Health Center. The New Haven health department, concerned that children in a physically isolated inner-city neighborhood were not receiving appropriate preventive or primary care services, established a school-based clinic by facilitating links between a community health center, a community hospital, and the local elementary school. Special efforts to also enroll preschool children in the neighborhood have been made.

Health care programs may reach out to day care centers (as in Lexington, Kentucky) and Head Start programs. They encourage parents and other family members to enroll in the provider's backup health centers—so that they can obtain care when school is not in session or when children require more comprehensive services than the school site can handle.

**Hours.** Offering services at hours convenient for working parents is also important. Some of the Pediatric Resource Centers in New York City accommodate working parents' schedules by offering evening and Saturday hours in addition to daytime hours five days a week. The West Dallas C&Y Project, with health center facilities co-located on elementary school grounds, has two evening clinics a week. Clinics are open year-round. The Jackson-Hinds Comprehensive Health Center in Mississippi offers pediatric care from 8:30 a.m. to 7:00 p.m. on weekdays, and is planning to expand the hours until 10:00 p.m. through a cooperative arrangement with a local hospital wishing to reduce emergency room demands.

Most of the primary care programs reviewed here have minimized waiting time by studying no-show rates and revising clinic procedures. They find that better communication with patients reduces cancellations. Others schedule preventive appointments for specific times but permit impromptu visits for sick care at any time. For example, the Jackson-Hinds Center and the PRCs make allowances for sick children who do not have appointments. Infants who are brought in sick, however, are also evaluated for immunization status and other preventive health needs.

A number of programs have coverage that extends to 24 hours a day, seven days a week. This reduces unnecessary emergency room utilization. Many members of low-income families have no experience consulting physicians after regular office hours by telephone, and may distrust such an arrangement because of previous failures to communicate with clinics after hours. Nurses at CHIP, in Roanoke, carefully instruct new enrollees about how to call their physician after hours. They even demonstrate how the doctor's beeper works. Health service plans that function on a capitated basis have numerous incentives to promote patient satisfaction and appropriate utilization of services. Unhappiness leads to consumer complaints and disenrollment, and physician inaccessibility leads to emergency room use. In the Bronx prepaid plans and a similar Minnesota program described at the project seminar, Medicaid recipients learn how to contact their physicians both during normal hours and after hours.

Jackson-Hinds Comprehensive Health Center,
Jackson, Mississippi

### Market primary care services to all community groups.

All families, and especially those with limited resources, find it difficult to make informed choices about where to seek health care for their infants and young children. For this reason, comprehensive programs seeking to provide quality care to poor families must market services actively by cultivating potential sources of referral, through outreach, and by advertising. The Jackson-Hinds Community Health Center targets neighborhoods with high rates of infant mortality by canvassing door-to-door and conducting health education activities. Center staff refer the women enrolled in prenatal care to other health and social services.

The Lexington Family Care Center recruits patients through on-site child care and adult education programs. The Center advertises on television and radio, visits public housing sites, and makes its services known to potential referral sources such as school guidance counselors and social service agencies. Staff members also recruit patients at the University of Kentucky's hospital, where the highest proportion of low-income women in the area give birth. Hawaii, similarly, relies on Healthy Start's hospital-based assessments to identify newborns at high risk for poor health outcomes, child abuse, or neglect. Although participation in Healthy Start is voluntary, the program recruits many families identified through screening and assessment by offering nonthreatening support.

Program planners can overcome cultural difficulties by analyzing the preferences and problems of different ethnic groups. Some barriers become apparent only after planners observe interaction at all levels of the program, including routine responses to telephone inquiries, and look at the levels of utilization of services by different community groups. Programs can reduce cultural barriers by hiring staff who are similar in ethnicity to patients, by printing materials in appropriate languages, and by making sure that translators are available when needed. COPC, in Dallas, strives to hire physicians who are similar ethnically to their patient populations. In the first year, the group responsible for hiring physicians for all participating health centers hired minority physicians for more than half of the 24 positions filled.

## Make health care affordable.

Medicaid reforms and eligibility expansions have increased financial access to health services for many low-income children and families. The federal Omnibus Reconciliation Acts (OBRAs) of 1989 and 1990 required all states to cover pregnant women and children up to age six at 133 percent of the federal poverty level, and to phase in Medicaid coverage of all children (up to age 19) born after September 30, 1983, whose family incomes fall below the poverty line. Children ages six through nine with family incomes below the federal poverty level are currently eligible for Medicaid coverage.

Many states are working to expedite their eligibility procedures for pregnant women. In 1990 Congress eliminated the requirement that infants be enrolled separately to receive continued benefits, making infants born to Medicaid mothers automatically eligible for Medicaid until age one as long as they remain with their mothers. In addition to eligibility expansions, the 1989 OBRA stipulated that children receiving EPSDT screens must also receive all services required to treat the conditions discovered, and that providers must be reimbursed by Medicaid. The 1990 OBRA mandated that all states outstation Medicaid eligibility workers in hospitals serving large numbers of Medicaid recipients and in federally qualified health centers.

The local programs studied in this project were among the first in the country to demonstrate that stationing Medicaid workers at provider sites greatly expedites enrollment. Such experiences helped to create a favorable climate for legislative reform at the national level. The PRCs in New York City arranged for a Medicaid eligibility worker to be stationed at several of its community-based (noninstitutional) sites. In Greenville, South Carolina, where intake workers are stationed in the hospital's maternity clinic, enrollment of pregnant women in Medicaid has increased, as has the proportion of women entering prenatal care earlier.[12]

Many of the programs described here make services affordable by using multiple funding sources and identifying patient resources so patients can receive care free, on a sliding fee scale, or through Medicaid reimbursement. Title V Block

Grant funding has been a major resource for low-income patients served by state and local health departments, whether or not they are eligible for Medicaid. Most programs achieve affordability by limiting the range of services (e.g., excluding hospitalization) for a target group or limiting the age group served (e.g., to children).

In addition to Medicaid, used whenever possible, programs seek extra funding from state and local governments to cover children who live in poverty but are not eligible for Medicaid because of undocumented residence status or who need services that Medicaid will not reimburse. At the PRCs, for example, federal MCH Block Grant monies help fund services for these purposes. Treatment services not covered by Medicaid are offered free of charge to patients in families with incomes below 100 percent of the federal poverty level, and on a sliding fee scale to families with higher incomes.

In CHIP, the state MCH Block Grant reimburses physicians at Medicaid rates to serve children whose families have low incomes but are unable to apply for Medicaid. The Lexington Family Care Center uses special federal MCH Bureau project funding for children who lose their Medicaid eligibility. The Bronx Health Plan offers poor families three health care coverage programs: a prepaid health services plan for Medicaid/AFDC recipients; the UniCare program, a pilot project offering health insurance to low-income uninsured residents of the Bronx; and the Child Health Plus program, which covers low-income uninsured and underinsured children under the age of 13. The source of payment changes, but the provider remains constant.*

CHIP has made a special effort to reduce the financial barriers to obtaining prescription medicines. Local health departments provide pharmacy services and, in a special arrangement with pharmacies in rural areas, replace medications provided to CHIP cardholders. Also, a local drugstore chain sells medications at rates comparable to the health department's.

Some states reimburse qualified local providers for services not routinely covered by Medicaid if the clients are eligible for "optional targeted case management" or for EPSDT. The Mississippi state Medicaid agency reimburses the Jackson-Hinds Center for social services, nutrition counseling, home visits, and transportation for infants enrolled in the state's Perinatal High Risk Management Program.

## Make Medicaid participation more attractive to providers.

Physicians in private practice may be reluctant to accept new Medicaid clients, especially physicians located in mixed-income areas who have few competitors accepting Medicaid. Nationally, surveys have revealed decreasing physician participation over the last decade.[13] As justification for nonparticipation, physicians cite their dislike of arbitrary claims processing, delays in receiving reimbursement, low fees, and discontinuous eligibility. The stigma of being known as a "Medicaid doctor" may also contribute. Some states have reversed this trend by raising reimbursement rates for primary care physicians who agree to be "preferred providers" for Medicaid-eligible infants and children.

**The local programs studied in this project were among the first in the country to demonstrate that stationing Medicaid workers at provider sites greatly expedites enrollment.**

The Virginia Medicaid agency's boost of reimbursement rates to levels close to the prevailing primary care fees has made it much easier for CHIP organizers to enlist local physicians in private practice. Hawaii reimburses obstetricians and pediatricians at prevailing private-practice fee levels and pays $90 for complete initial EPSDT screens. In Greenville County, South Carolina, 28 private obstetricians agreed to accept 400 new patients, provided that Medicaid reimbursements for their care were guaranteed. The state's Health and Environmental Control commissioner agreed to assure payment for women deemed to be eligible by the Greenville Hospital System.

## Reduce structural barriers to access.

Some access barriers to health care originate within the system, rather than from client or provider characteristics. Some funding streams limit participation to some of the children in a family and exclude their siblings. Other funding sources—such as CHIP and New York State's Child Health Plus program—cover preventive and primary care, but make no provision for hospitalization.

A number of the programs studied have been creative in eliminating

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** Child Health Plus is a New York State health care coverage program offering subsidized enrollment to poor and low-income children under age 13 who are not covered by Medicaid or Medicare. This program provides ambulatory services through a primary care case management system. It provides no coverage for inpatient services.*

structural barriers to access. For example, the South Carolina Department of Health and Environmental Control/MCH Program gives private physicians vaccines for dispensing free of charge to poor children (with an allowable administrative fee for the doctor). This reduces fragmentation, increases continuity, and may reverse the practice of referring children to health departments. The PRCs have extended eligibility to the siblings of children who are formally classified as being at high risk for poor health outcomes. This helps to prevent fragmented care for families. At New Haven's elementary school clinic, younger siblings are seen by appointment for well-child care.

## Comprehensiveness

Comprehensive health care implies a scope of services that are appropriate for the risks that program enrollees experience. Many children in poor families are seen in practice settings that do not pay sufficient attention to preventive care, including parental guidance, risk assessment, and referral to other health-related services. Physicians working in busy group pediatric or family practices are frequently unable to spend enough time with disadvantaged children and their caregivers to ask many questions, to counsel on normal child development and safety, and to advise on parenting practices. Some families need a great deal of assistance in order to carry out a physician's advice. They may require social workers, caseworkers, homemakers, child care, or financial or legal services.

Comprehensive care designed to meet the needs of low-income families should include three major categories of services: primary care with ongoing arrangements for hospital care; specialty care; and support services. A comprehensive health care system for low-income families should link these classes of services. Poor families with infants and young children may have difficulty in gaining access to the first two service categories, or in using them appropriately, if the third category is missing.

**Primary care.** Traditionally, primary care encompasses all of the personal preventive services that professional groups recommend to promote optimal growth and development, plus routine pediatric care and referrals to emergency and specialty services. Well-child care begins with frequent visits in the neonatal period and during the first year of life, and continues with regular visits through age five. Services include treatment for minor illnesses or injuries; immunizations; nutritional assessment; advice on childrearing and illness care; health education; assessments for problems with development, vision, hearing, genetics, and exposure to lead; and dental screening and prophylaxis.

**Specialty care.** Specialty services may require access to a major tertiary medical center, at least for an initial evaluation and treatment plan. Children suffering from serious or chronic illnesses, severe injuries, disabilities, severe emotional disorders, or metabolic disorders need continuing specialty health care or mental health services. Children with long-term problems or special health needs also need primary care and multiple kinds of support services that enable the family to participate in their care at home.

**Support services.** At a minimum, support services include outreach, transportation, family risk assessment, and care coordination. Families with children who have special health needs may need respite care and special training. Ideally, support services include counseling; parenting education; and social services that link the family and child with legal, educational, financial, and other community services. Home visits are often the preferred vehicle for case management, care coordination, parent education, and monitoring.

Many historical, structural, and financial obstacles stand in the way of organizing comprehensive service systems for poor families. The historical mission of major service providers, such as the voluntary or municipal hospitals, may not encompass preventive health care services or extensive educational and social services. Many health departments traditionally have not offered acute care because of limited resources and/or opposition from physicians in private practice. In the 1980s, state Title V agencies were hampered by weak statutory authority, a diminishing federal role, and declines in constant-dollar funding (e.g., a two-thirds drop between 1967 and 1984[14]), which

**Comprehensive care designed to meet the needs of low-income families should include three major categories of services: primary care with ongoing arrangements for hospital care; specialty care; and support services.**

limited their ability to assure access to medical care for poor families. In many states, Medicaid reimbursement fees for primary care are too low to attract private practitioners in areas with high concentrations of poor families.

Programs like those described here use a variety of approaches to link infants and children to comprehensive services, including services that support and strengthen families. Among these approaches are the concentration of services at a single site; the channeling of services to certain categories of high-risk children; and the creation of special links between primary care, specialty care, and support services.

Strategies that help planners make services more comprehensive include the following:

## Make comprehensive health services available through a single entry point.

Most experts believe that preventive services and acute care for illness ideally should be provided at the same place—the primary care provider or medical home. In many communities around the United States, however, poor families receive immunizations and preventive services from the public health department, and go elsewhere for acute care. The wisdom of this fragmentation of services has been debated for some time by experts in public health and pediatrics. Analysis of primary care systems in Europe, however, indicates no adverse effects on utilization or patient compliance from providing preventive and acute care in different places.[15] The problems cited frequently in the United States may be more directly related to an insufficient supply of preventive and acute primary care services, higher poverty rates among users, and a lack of coordinating systems than to separate service locations. Millions of poor infants and children receive insufficient preventive care and support services from hospital clinics and emergency rooms, which by default have become their usual source of all health care.

Most of the programs featured in this report assume responsibility for linking enrolled infants and children with the full range of comprehensive services that they need. The availability of each of the components, however, requires negotiations among the providers and with the organizations that assume the financial risk. For example, physicians in the CHIP program or in Hawaii may refer children to a health department for immunizations because it is cheaper for all parties. (A national immunization program may eliminate such unnecessary fragmentation.) Care coordinators or home visitors remind parents about immunizations and assist them with making logistical arrangements, thus monitoring overall utilization of essential preventive services.

Community Oriented Primary Care Program, Dallas, Texas

## Create systems for channeling needed services to high-risk parents and children.

Support services for low-income families are labor-intensive, and they focus on the social, emotional, legal, or economic

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needs of the family as well as medical problems. Funding support services is generally difficult because most health care reimbursements require a medical justification. The extent to which families receive support services depends on the willingness of funders and providers to recognize the links between social and economic risk and health outcomes. Medicaid can fund support services under some conditions. Usually, programs provide these services through other grants from public and private sources, including special grants from Title V or other federal Public Health Service grants.

Disadvantaged infants and children whose families receive support services in connection with primary health care have better health outcomes than those whose families receive no such services. This is especially true for children who have medical conditions that place them at very high risk.[16] At a minimum, support services help parents to use health services appropriately, to prevent serious illness and hospitalization, and to avoid injuries. Research evidence is also accumulating that intensive support services (including high quality child care) for families and children who live in high-risk environments produce additional favorable outcomes. Children whose families receive these services are less likely than others to suffer child abuse and neglect, and are more likely to perform well in school.

**Risk assessment.** Many comprehensive programs assess and document multiple risks to families. Many of the programs considered here give priority for enhanced services to a designated target group of low-income infants and young children, consistent with good public health practice in which those families who have the highest level of risk or needs are served first. As applied, however, the practice may overlook individual circumstances that place children at risk. Eligibility for enhanced services can be based on any combination of criteria, including income, social or medical risk factors, age, and state and national regulations for public assistance programs. State agencies have developed risk assessment instruments to offer families enhanced support services based on level of need. These instruments are sometimes used to establish program eligibility, and they assist care coordinators in planning how to meet family needs.

Of the 11 programs featured in this report, six use risk assessment instruments to identify children eligible for care coordination and home visits. The Hawaii and Mississippi risk forms classify 15–30 percent of eligible women and infants as high-risk, and the programs offer these individuals enhanced services. Risk factors include, in addition to medical problems, social criteria such as young age of the mother, failure to obtain adequate prenatal care, and violence or substance abuse in the family.

South Carolina was one of the first states to use targeted care coordination in reforming its perinatal services system. The state requested a federal waiver to offer the service to high-risk pregnant women eligible for Medicaid. The High Risk Channeling Project now covers more than half of all Medicaid births. Infants considered at high risk receive care coordination for one year following birth. Mississippi designed its Perinatal High Risk Management Program similarly, but this state uses the 1986 OBRA targeted case management option to coordinate care for pregnant women and high-risk infants. The Mississippi health department analyzed care coordination services by functional components—and by the time and expertise associated with each—in order to plan for and negotiate appropriate Medicaid reimbursement rates and to develop forms for billing and client follow-up.

**Case management.** Many low-income families find it difficult to negotiate the fragmented system of health care and social services even though the aim of these services is to help them promote the optimal growth and development of their young children. They, and indeed all families, might benefit from a care coordinator or case manager who makes referrals, assures follow-up, arranges transportation, solves problems, and reminds them about the next checkup. Case management, which encompasses a wide variety of providers and content of services, provides the link that can mean the difference between receiving and not receiving services. Case managers can be advocates for clients, arranging for transportation, ensuring that translation is available if needed, or explaining the purpose of recommended services. Their assistance to families tends to have a strong educational component.

Case management, also referred to as "care coordination" in this report, is discussed later as a strategy under "Coordination." The two terms are synonymous, although programs may emphasize case management as a service in its own right or as a service integration strategy.

Case managers witness difficulties firsthand, and they are often in a unique position to identify systemic barriers and bring them to the attention of administrators. In Mississippi's perinatal program, social workers and nutritionists submit two case write-ups to their district supervisors on a monthly basis. One case illustrates excellent professional performance, and the second provides examples of systemic barriers. Both case summaries are sent on to the health department's social services director as part of the program's quality assurance review, and to stimulate policy recommendations and program change.

Case management is sometimes reimbursable. It is a specified service in P.L. 99-457 (see Glossary) for infants and toddlers with special health needs. This legislation emphasizes case management as a vehicle for empowering families to be the primary case managers for their own children. Case management is also reimbursable by Medicaid under the 1986 OBRA amendments that provide for enriched services and targeted case management for pregnant women and infants who are at high risk for adverse health outcomes. Case management may also be reimbursed as a prescribed service under EPSDT if it is medically necessary for completing recommended treatment.[17]

**Multidisciplinary teams.** The professional domain of health-related family support services includes many disciplines as well as levels of formal training. Qualifications of practitioners range from a general equivalency diploma and a few weeks of training for paraprofessionals to a master's or doctoral degree and clinical licensure. Publicly funded health clinics frequently use a health team approach for delivering services to needy families, partly to enhance continuity and coordination of services, and partly to facilitate case conferences for patients with multiple problems. The cohesion of the team depends largely on the administrative arrangements that support communication and coordination of team efforts, as well as recognition from the clinic director that all professionals on the team are important. Unfortunately, state budget cutbacks and the low priority afforded support services result in loss of positions for social workers, psychologists, and home visitors. These losses affect rural areas disproportionately.

In Mississippi's perinatal program, as implemented by the district health offices, a nurse, social worker, and nutritionist work together as a team to assess family needs and monitor the progress of the pregnant woman and subsequently her infant. Each three-member team carries a caseload of approximately 150 pregnant women and infants. Depending on the problems observed, one of the team members takes the lead role in making home visits and educating the parents about caring for the infant. Home visits, in which at least two members of the team participate, offer travel time for comparing notes. The team members also learn from each other and contribute to each other's professional growth. A team interviewed in Panola County, Mississippi, reported that they preferred to work together because they learn skills from each other's professional discipline and can discuss the same family.

The Dallas C&Y Project has maintained a health care team model virtually intact since 1969. The team includes one senior physician, one or two midlevel practitioners (either a physician or a nurse practitioner), a social worker, a case aide, a medical assistant, and a clerical support person. The social workers have multiple tasks associated with preventive services, outreach and follow-up, and management of chronic or terminal illnesses. They are responsible for evaluating every new family coming to the clinic, and for identifying psychological, social, and environmental factors that could contribute to family stress or crises. They work with families as case managers to develop and implement intervention plans.

**Home visits.** Home visits have long been included in public health and social service programs serving poor families with young children. Traditionally, public health nurses visited all mothers with new babies shortly after birth, but this practice has been widely curtailed with state funding cuts. In cases where social or medical needs were high, they returned as often as necessary until problems were resolved or until other service arrangements were complete. Nearly all of the programs

**Case management, which encompasses a wide variety of providers and content of services, provides the link that can mean the difference between receiving and not receiving services.**

considered here send social workers or nurses on an ad hoc basis to the homes of high-risk families. Only four programs, two state and two local, have formal protocols that stipulate when visits should be made and by whom.

In Hawaii's Healthy Start Program, trained paraprofessional workers make home visits to families at high risk for child abuse or neglect. The visits occur weekly or twice a week during the newborn period, then decline in frequency if family risk factors decrease. Home visitors provide emotional support, parenting guidance, and assistance in obtaining other services. They check to see that the family brings the infant to the doctor—the medical home—for preventive and acute care. Their average caseload is 15–25 families.

South Carolina's and Mississippi's public health programs for pregnant women and high-risk infants require staff to make some home visits as part of case management.* The content of the visits is geared more toward meeting the families' immediate health, housing, and income needs and less oriented toward family interaction and reduction of stress factors. Nurses or social workers tend to focus on the mother's pregnancy or the care of the newborn.

The home visits conducted by CHIP are less structured than those in the Hawaii program, but more structured than those reimbursed by Medicaid in the state health department programs of Mississippi and South Carolina. CHIP home visitors are public health nurses or trained paraprofessionals (family intervention specialists) who regularly visit families with infants or one-year-olds. The paraprofessionals receive on-the-job training on how to meet family needs with a special focus on the child. They initiate the social services component of CHIP by visiting the families to conduct a needs assessment at or shortly after enrollment. They emphasize parenting education and support, job skills, and the removal of any barriers to other needed services. Risk assessment and the frequency of visits are not as routinized as they are in Hawaii, but the content of visits is broader in scope than in the Mississippi and South Carolina programs; it includes more parenting education in consultation with a full-time staff professional.

## Enhance the content of support services.

The rising proportion of births to single mothers—27 percent in 1990—and the steady proportion of infants born into poverty increase the need for support services. A large proportion of children now begin life without the benefit of a stable household, a condition that is associated with greater risks for mental and physical health, as well as diminished capacity for learning. Health care providers are often the only "system" encountered by new families that deals with the needs of the infant or the child first. In contrast, social welfare agencies and housing authorities primarily consider financial eligibility and marital status or problem situations. Parents may find themselves instructed by the physician to carry out a treatment plan for their infant that requires household improvements or caregiving arrangements far beyond their economic means, while the welfare office informs them that their income is too high to qualify for Medicaid.

Health care providers serving poor families should help them address the overall impact of treating a child's severe or chronic illness. This approach may be accomplished through establishing collaborative links with other agencies or by enhancing services. Over the long run such collaboration would help improve health status and decrease unnecessary hospital utilization.

**Social and mental health services.** Nearly all of the programs described here employ social workers to assist the families of infants and young children enrolled as patients. Some programs train social workers to work as part of a health care team or within a formal protocol, while others employ them as an additional resource for families requiring assistance for nonmedical problems. Nurses or lay workers often provide outreach services as part of their care coordination functions. Nevertheless, high caseloads, high staff turnover, and reimbursement problems limit the scope and amount of social services delivered to families enrolled in the programs.

The PRCs in New York stipulate that social workers serve as members of the interdisciplinary team that cares for high-risk infants and children. For example, all infants born to mothers less than 16

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** These home visiting activities should not be confused with the Resource Mothers programs, which train lay home visitors to assist and support pregnant teenagers and, later, the young women's infants.*

years of age are to be visited at home by a social worker, even if no health problems are apparent. Also, a social worker must conduct a needs assessment for all low-birthweight infants who exhibit frequent illnesses or developmental anomalies. An annual chart review measures provider compliance in delivering the recommended services. Unfortunately, the PRCs have found it difficult to recruit and retain social workers because public agencies can pay higher salaries and because of the frustrations inherent in working in large ambulatory care settings.

Lexington's Family Care Center has brought social work training, as well as services, into the routine provision of care. Students from the University of Kentucky College of Social Work participate in patient care, and all families enrolled for health care, child care, or adult education receive case management services from a social worker. The Center incorporates a wide variety of social service programs in its building, which encompasses adult education, health care, child care, mental health and psychological services, and job training. The social work case manager identifies service needs and refers families to a wide range of other services.

Programs that have not incorporated social support into their core services find it difficult to fund these services—despite identified need. The New Haven clinic based at an elementary school found that it needed more social work than the several hours a week budgeted initially, but funds could not be stretched to cover additional hours. Community health centers and public health departments have chronic shortages of social workers, exacerbated by the difficulties of obtaining Medicaid reimbursement.

Most of the programs described here address mental health within their social work and parenting education functions. Paraprofessionals can frequently recognize mental health problems that require more specialized care, but specialists may be inaccessible.

Few of the programs offer direct services to combat substance abuse by the parents of enrolled infants and children, and social workers and home visitors may not be trained to identify drug abuse and help parents obtain treatment. Some refer parents to treatment programs, but the scarcity of programs that will accept mothers and children, and their uncertain efficacy, can make such referrals an empty ritual. Hawaii has made important strides in integrating detection and treatment of substance abuse into its Healthy Start Program. Staff screen infants at birth for exposure to illicit drugs and alcohol, and query parents about their use of such substances. Families who need services are referred to Hawaii's Baby Safe program.

**Nutrition services.** WIC (the Supplemental Food Program for Women, Infants, and Children) is closely linked to all of the programs studied. Most of the participants in these programs are eligible for WIC, and program staff encourage them to enroll. The WIC office is often located at or near the public health department or community health center. In some cases WIC staff play a role in referring pregnant women and infants to the comprehensive primary care programs. WIC offices also benefit from their links to these primary care programs—both because of referrals and because nutritionists may receive part of their salaries from the health programs.

Most of the comprehensive programs have not focused systematically on infant feeding, beyond teaching the conventional and current best practices. All the programs stress appropriate diet during pregnancy. Breastfeeding, food shopping, food storage, and cooking receive less attention, and most program staff have lowered their expectations about breastfeeding among low-income mothers, especially teenagers. They are satisfied if mothers practice sanitary bottle-feeding and follow a recommended schedule for introducing solid foods.

A nutritionist, a member of the nursing staff, or a physician may provide nutritional assessments and services. Most programs do not provide nutrition intervention beyond WIC and advice to parents about feeding, unless problems are apparent. For example, the New York City PRCs include a nutritional assessment as a standard component of a routine infant physical examination. A nutritionist must conduct the assessment and recommend appropriate measures only if the infant or child has a chronic medical problem or exhibits a marked deviation in height or weight, or sudden loss in rate of growth.

The Mississippi health department and the Jackson-Hinds Comprehensive Health Center employ full-time nutritionists.

**Nearly all of the programs described here employ social workers to assist the families of infants and young children enrolled as patients. . . . Nevertheless, high caseloads, high staff turnover, and reimbursement problems limit the scope and amount of social services delivered to families enrolled in the programs.**

Medicaid covers some of their salaries. The state health department determined several years ago that infants and children from low-income families, especially from semirural or rural areas, were at heightened risk for chronic malnutrition or diarrhea. Consequently, nutritionists were added on a full- or part-time basis as members of the teams working with mothers, infants, and toddlers served under the perinatal program. During a home visit the nutritionist assesses the available food, purchasing habits, and storage and cooking conditions; and, where necessary, teaches the mother more sanitary, economical, and nutritious approaches to feeding her children.

**Parent education and support.** Two concepts have influenced the design and evolution of child development and parental guidance services in some of the comprehensive primary health care programs studied. First, the emotional health of children influences their cognitive and motor development. Second, the parents' or the caregivers' mental health and education influence their children's emotional health, as well as their cognitive and motor gains. Programs that make parenting education a high priority recognize that parents and caregivers with limited incomes, education, and time may need extra encouragement and support to ask questions about normal child development and to voice concerns about infants and young children.

The incorporation of these concepts into programs varies widely. Some programs hire staff who are sensitive to child development issues and to the difficulties poor parents face. Others allow parents extra time to spend with nurses individually or in groups for education. Some programs employ a child development specialist for consultation and to train midlevel and paraprofessional staff how to make appropriate assessments and referrals. Still others build parent education and activities with children into the content of their services, including home visits.

CHIP's origins in Roanoke's local community action agency, TAP, helped to create a strong consciousness of parenting education as an essential service component. TAP had long been responsible for the community's Head Start and Title XX child care programs, which by definition include some parenting education. A Kellogg Foundation grant enabled CHIP to hire staff with appropriate training in this area. Parenting education is one of four case management focus areas provided by the family intervention specialists and public health nurses who visit the home together. Parents of infants and toddlers (through age two) receive monthly home visits and guidance about appropriate developmental milestones. A parent involvement specialist, who has advanced training in early childhood development, coordinates group activities and classes for CHIP parents and sees families who require more complex, direct intervention. This same specialist trains and consults with the public health nurses and family intervention specialists. A toy lending library helps parents learn enjoyable ways of interacting with their children.

Parenting programs are core services at some of the New York City PRCs because most of the parents live under stressful conditions and lack parenting skills. Priority for enrollment goes to infants or children of adolescent parents, parents with parenting problems, homeless children, and those under the supervision of New York City's Child Protective Services. PRC staff also routinely recommend parenting programs for teenage mothers who have trouble coping or who suffer from social isolation. The PRCs have adjusted their hiring and the content of their staff training and services to address an increase in parenting problems.

Hawaii's Healthy Start uses parenting education and support as a basic strategy to achieve a major goal—prevention of child abuse and neglect. The Kapiolani Medical Center trains all paraprofessionals employed by the program. Family support workers visit families periodically for the five-year enrollment period, with close supervision from social workers or psychologists. Using the Nursing Child Assessment Satellite Training (NCAST) instrument, they plan parent education interventions. NCAST scales measure parent-child interaction, the home environment, and infant feeding.

The teams build parenting skills individually and in groups, depending on the mother's readiness and ability. Materials such as the *Parent and Baby Play Book* help the visitor structure the content of home visits. Parent support groups help increase the mother's self-esteem and

**Primary care providers with formal links to or arrangements with numerous specialists find it much easier than those without such links to refer infants and children from poor families for specialty care.**

reduce social isolation. Periodic community education activities enhance awareness of child abuse problems and prevention strategies. Paraprofessional family support workers, working under the supervision of a master's-level health or social work professional, visit the parents of high-risk newborns. A child development specialist provides training to workers and parenting education to families at some program sites.

### Establish linkages with emergency, inpatient, and subspecialty care providers.

One of the primary care provider's key functions in a comprehensive care system is to decide when a child requires specialty or subspecialty care, which specialists to recommend, and if and when a child requires hospitalization or emergency care. Poor families find it exceedingly difficult to obtain specialty care, even when they have Medicaid. They may have to travel long distances, make multiple phone calls, and set up appointments far in advance if the condition is not urgent, and even when they get the appointment, the specialist rarely has enough time to educate the parents about the child's needs or to explain available treatment options.

Primary care providers with formal links to or arrangements with numerous specialists find it much easier than those without such links to refer infants and children from poor families for specialty care. Such links often include contractual relationships, and they promote timely communication between the primary care physician and the specialist. Stand-alone primary care providers may lack formal links unless they participate in a larger system of care.

Among the programs reviewed, The Bronx Health Plan and programs sponsored by major medical centers (such as the New York City PRCs and the Dallas COPC) have the strongest links between primary and specialty care. In each of these cases, program staff make referrals to specialists who have academic or administrative arrangements with the primary care services. These formal ties may mean that the patient can see the specialist sooner than otherwise, or for a longer period of time, and that the primary care physician receives a more complete report.

The situation at one of the community health centers participating in The Bronx Health Plan illustrates a strong primary-specialty care connection, albeit one that points out a major problem for the majority of health center patients. Plan enrollees (Medicaid recipients) can see a specialist within a week or two, whereas most of this health center's patients (who are not in the Plan) wait several months. Also, enrollees can see the specialist at his or her private office rather than at the hospital outpatient clinic. Moreover, the enrollee's primary care physician receives a report immediately from the specialist, rather than no report at all, which happens frequently.

Comprehensive Health Care System for Infants and Children, South Carolina

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## Coordination

Care coordination usually refers to the "ombudsman" role of the primary care practitioner, or provider team member.[18] The physician or nurse practitioner refers patients to specialists or the hospital, when necessary, and explains treatment options, frequently discussing the financial implications of alternative courses of action. Low-income families with infants and small children are often overwhelmed by the financial and family implications of serious medical problems, and they find it difficult to comply with preventive or therapeutic measures. A family whose child needs to see a specialist is far more likely to comply if the primary care provider facilitates and coordinates the appointment, makes sure that financial arrangements are in place, and follows up with the specialist and the family to see that they have agreed upon a financially feasible treatment plan.

"Care coordination" is a term used interchangeably with "case management" by many professionals and policymakers. Discussed earlier in this report as a strategy for making services more comprehensive, case management should be distinguished from "managed care," which applies to an overall system of health care services designed to control costs and curb utilization of unnecessary services for enrollees. In this document, care coordination usually refers to the set of facilitating activities performed by a health care professional to assist pregnant women, infants, and children at risk of social or medical problems in gaining access to needed services. The scope and intensity of care coordination activities is determined largely by the source of payment and the specific terms negotiated between the payer and the provider.

For example, when private-practice physicians receive enhanced Medicaid fees to coordinate care for infants, they may be required to authorize emergency room services. Their care coordination responsibilities do not require them to coordinate social services or make home visits to infants enrolled in their practice. Social workers and nurses, however, who coordinate care for at-risk infants, must contact the family and/or make home visits in order to bill Medicaid.

Primary care providers serving disadvantaged families face cultural, economic, and structural obstacles in coordinating medical care for infants and children. These obstacles are identical to those impeding accessibility and comprehensiveness. The provider's ability to offer a financially accessible system of care may be a factor in the patient's appropriate utilization of primary and specialty services and in complying with physician recommendations.

Coordination of care for needy families can be time-consuming and costly. It involves learning about all of the family circumstances that affect medical services for the infant or child. Over time, however, coordination usually requires less time and effort, as needs are met. Strategies to achieve care coordination for infants and children from poor families include creating separate reimbursement for the coordination service and offering incentives to providers to include coordination services as an integral part of health care.

Strategies that work include the following:

### Offer care coordination as a Medicaid service.

As described earlier, federal revisions and expansions in the Medicaid program, beginning with the 1986 OBRA reforms, allow states to make certain groups eligible for case management, and to qualify providers to be reimbursed for this service. Medicaid agencies in 39 states now include care coordination in their packages of reimbursable prenatal care services. The agencies also extend care coordination services to infants, but specific requirements may vary. Young children can also receive care coordination, but most states have limited this service to children with special health needs.[19] Nationally, a very small proportion of infants and young children who might benefit from case management or care coordination actually receive it.

In most states, implementation of care coordination varies from a few demonstration counties to an entire state. Core functions of care coordination are risk assessment, the development of a plan of care, coordination and referral, and follow-up and monitoring. Issues still under discussion include performance norms for different professional and provider groups, appropriate caseloads, reimbursement policies, and data collection.[20] In some cases, making care coordination available throughout a county or district facilitates discussions among public and private providers and moves them in the direction of planning a health care network or system.

Care coordination generally means assigning one health professional to a single child and family for the duration of enrollment. This professional, usually a nurse or social worker, helps the family take all the steps needed to follow medical advice, keep medical appointments, and use health services appropriately. Care coordinators can be physicians, nutritionists, or lay workers, depending on state policies and staffing patterns in the implementing agencies. In the Mississippi perinatal program, case managers are "professional friends," whose activities include outreach, risk assessment, home visiting, counseling, health education, referral, and rescheduling missed appointments. The Jackson-Hinds Comprehensive Health Center designates social workers as primary case managers for high-risk pregnant women and infants. The salaries of these workers are covered almost entirely by Medicaid reimbursements under the PHRM/ISS Program.

CHIP has designated public health nurses employed by the health department as care coordinators. Virginia block grant (Title V) funds support the nurses' salaries, except for a small portion that Medicaid reimburses through the optional targeted case management provision. Infants and one-year-olds who meet certain high-risk criteria qualify for this service. Virginia's Medicaid policies stipulate that only nurses or social workers can be official care coordinators. Care coordination as practiced in CHIP links the participating private physicians with the family and children in a relationship that meets educational and social, as well as medical, needs. Physicians count on the CHIP nurses to follow up their recommendations and to monitor problems as they occur.

Care coordination for health services is most important for children with special health needs. These children may constitute 10–20 percent of all enrollees in programs targeted specifically to low-income and high-risk families. Hawaii is using federal and state funds to hire physician care coordinators for children considered at risk under P.L. 99-457.

## Promote care coordination as part of managed care.

In prepaid managed care plans or under preferred provider plans sponsored by Medicaid, the patient's assigned primary care physician performs care coordination. The physicians have financial incentives to coordinate care, because the costs of unnecessary hospitalization or use of the emergency room reduce the organization's annual profit and physician bonuses. Severely ill patients, at risk of hospitalization, may receive social services and extra attention from the managed care central staff.

Experience to date indicates that prepaid managed care plans serving large numbers of Medicaid infants and children have no special provisions for care coordination apart from the services usually made available by participating health care providers. The plans have no incentives to link patients to social and educational services except in cases where such services reduce medical care costs over the long run. For example, in certain cases, The Bronx Health Plan pays the transportation costs for children to receive therapy or treatments when family resources are inadequate.

Large managed care plans, such as those contemplated by some health care financing reform proposals, will set or negotiate rates on overall cost experiences of similar groups, and will feel competitive pressure to eliminate some services. Unless state regulations so direct, plans will have little incentive to monitor outreach, care coordination, or follow-up activities that assure appropriate utilization of health care services for infants and children. Care coordination guidelines, utilization performance standards, and penalties for noncompliance should be integral parts of any managed care plan serving infants and young children at risk.

> **Offering a range of family services at one site—or linking services through funding and administrative arrangements—increases the likelihood that low-income clients will obtain needed services.**

## Integrate health, social, and patient support services.

Offering a range of family services at one site—or linking services through funding and administrative arrangements—increases the likelihood that low-income clients will obtain needed services. Integration of services, implying cross-agency coordination and sharing resources at the management or delivery level, does not necessarily mean that they must be co-located. MCH programs increasingly offer prenatal care, primary health care, social services, parenting education, WIC, Medicaid eligibility determination, and family planning at the same facility.[21]

Such integration of preventive services is common at public health clinics, community health centers, and hospitals, and it is sometimes available through school-based programs for pregnant and parenting teens. Co-location of health and educational services also occurs in school-based clinics. Child care, job training, or adult education programs are linked less commonly to health care programs.

The New Haven Brennan Health Connection and the West Dallas C&Y Project both illustrate school-linked service models. Administratively, the school and health programs are separate, but they jointly plan and deliver health services to enrolled children. More than 20 years ago in West Dallas, health centers were constructed next door to several elementary schools. The notion was to place services within walking distance or a short bus ride for mothers with young children. The centers serve as community gathering places and house innovative educational programs related to health.

The Family Care Center in Lexington was designed expressly to house multiservice programs. In a 48,000-square-foot facility, it offers child care, preschool and kindergarten classes, adult education, job training, psychological services, and comprehensive health and dental care for low-income families with young children at medical or social risk. Proximity to the University of Kentucky hospital and specialty clinics facilitates referrals and follow-up for patients and promotes multidisciplinary coordination and training.

In Roanoke, CHIP integrates parenting education and family development services with health care. CHIP's incorporation as a separate nonprofit organization helps it maintain the mission of strengthening families as a priority. An ongoing evaluation effort is examining variables associated with family functioning, parenting skills, child development, and use of health services.

## Continuity of Care

Continuity of care occurs when providers know their patients, manage their health care directly over time, and maintain medical records that clearly document illnesses or conditions and related treatment plans and progress notes. Records show the results of tests, specialty care, or hospitalization, and the regular provider reviews them. Administrative staff also play a role in enhancing continuity when they schedule patients' appointments with the same providers or teams at each visit, and when they remind patients about upcoming appointments.

State and local initiatives to identify medical homes for poor children aim to increase continuity of care and reduce the fragmentation that occurs when children obtain primary care in emergency rooms or from different providers. Obstacles to continuity can have "patient" origins—as when a family seeks a new provider because it cannot pay a previous provider. "Systems" obstacles to continuity include loss of insurance coverage or program eligibility, lack of coordination between the primary care provider and local hospitals, and limited service programs (for example, well-child clinics or immunization campaigns conducted outside of comprehensive health programs).

In health programs for poor families, a physician may be the primary care provider, but it is often a nurse practitioner or physician's assistant who provides the most consistent care. Some programs rely on case managers or case coordinators to promote continuity, and in all programs, especially those staffed by medical residents or health care teams, quality record keeping enhances continuity.

Strategies that improve continuity include the following:

### Ensure that children have a regular source of ongoing care.

Whether or not they use the term medical home, each of the local programs studied strives to be the regular provider or "medical home" for the children in their area, and the state initiatives have tried to increase the supply of providers willing to accept this responsibility. This concept applies to both fee-for-service and capitated health maintenance arrangements.

Trust and clear communication are essential to continuity, and low-income families who have never had a regular primary care provider often must be taught how to use such as provider. Providers must also be educated about the needs, expectations, and fears of such families.

In Roanoke, parents select a participating private physician who will see the child throughout his or her enrollment, usually until age nine. Families enrolled in CHIP receive instructions and "coaching" from nurses about how to rely on their new medical home. CHIP nurses also instruct the physicians in dealing with the special circumstances affecting some of their patients. In both the Minnesota and the Bronx Medicaid managed care programs, in-depth patient education provided during the initial enrollment process emphasizes rules, rights, and requirements. Patient education related to appropriate utilization of preventive services falls within the purview of the participating plan or the provider. In Minnesota, county Medicaid workers also receive training because Medicaid enrollees frequently call the county for information about benefits.

"Lock-in" provisions, pursued by capitated health plans to increase financial stability, can also promote continuity.* But other structural problems can undermine it. For example, in New York, patients are charged for out-of-plan use of emergency rooms, but if they cannot pay, the charges are covered by Medicaid or the bad debt and charity pool. This arrangement prevails because all parties perceive the cost of correcting it as too high—dropout rates from capitated plans are high for voluntary and involuntary reasons, preferred providers may in fact be hard to contact by telephone when there is an emergency, and deciding if the patient is at fault is time-consuming.

## Provide prenatal care and follow-up after birth.

Continuity of care ideally begins before birth, when a pregnant woman begins thinking about pediatric care for her newborn. Many obstacles militate against continuity for women and teens from low-income communities. The shortage of obstetric providers and the introduction of perinatal regionalization programs often divorce prenatal and obstetric care from pediatric care following discharge from the hospital. Hospitals with high-risk prenatal care programs and neonatal intensive care units may not have strong referral links with providers in the mother's community. The high mobility of families following the birth of an infant can compound the lack of formal relationships among providers, making follow-up and tracking difficult.

**The high mobility of families following the birth of an infant can compound the lack of formal relationships among providers, making follow-up and tracking difficult.**

Some of the comprehensive child health programs considered here link community-based providers with the maternity wards delivering the majority of infants who will live in their catchment areas. The C&Y Project has discharge planners placed in Parkland Hospital's maternity ward; they seek to contact families with newborns who live in West Dallas. The state perinatal high-risk programs in Mississippi and South Carolina, among others, assure links between maternity and pediatric care for women who received prenatal care from local public health department clinics. Hospitals should routinely incorporate such practices into maternity discharge planning.

Healthy Start in Hawaii employs a separate cadre of workers to channel newborns at risk for child maltreatment and other problems to a program of home visits that brings them in touch with health care and other community services. Early identification workers collaborate with the maternity ward nursing staff to screen mothers at hospitals that deliver infants in the program's catchment areas. They screen all mothers at the time of delivery for the presence of potential risk factors in the family, using the Family Stress Checklist, and conduct in-depth interviews with women identified by the checklist as potentially at risk. They invite high-risk mothers to enroll in Healthy Start before leaving the hospital. The home visitors make sure that enrolled mothers and infants receive health care within weeks of leaving the hospital.

## Ensure that children see the same medical practitioner at each visit.

The PRCs of New York City consider that "continuity of care" is assured when more than half of the patient's primary care visits are with the same provider. In 1992 continuity in the eight PRCs ranged from

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** Enrollment provisions restrict patients from seeking care without going through a designated primary care provider who authorizes referrals to specialty care when needed. Unauthorized care is not reimbursed, although there may be many exceptions in practice. These regulations also prevent patients from changing primary care providers more frequently than once a year without permission from the managed care plan, a provision that can jeopardize patients who are not receiving quality care.*

49 percent to 81 percent, with an average program rating of 70 percent.[22]

When programs use medical residents for primary care, continuity is sometimes more difficult to achieve. Physicians in training may spend only from several months to a year in the same facility. To promote continuity, the Lexington Family Care Center uses residents who can work in the program for three years. In addition, whenever possible, the Center schedules patient appointments with the same doctor. Because the program is relatively small, the medical director and two nurse practitioners who are present each day also provide continuity.

Obtaining hospital admitting privileges for primary care providers further improves continuity. The medical director at the Family Care Center is on staff at the hospital where children receive emergency, inpatient, and subspecialty care.

In programs where infants and children do not see the same practitioner for preventive and acute care, case management helps assure continuity of care. For example, Mississippi's perinatal program keeps case managers with the same family throughout pregnancy and infancy. The program also coordinates with First Step, which provides services under P.L. 99-457 to infants and toddlers who qualify. The case manager helps these families until the child is three years old, when the state department of education takes over the case.

### Use record-keeping systems that promote continuity.

A complete health record is essential for continuity of care. Since poor children often receive primary care from a team, in a group practice setting, or from medical residents whose assistance is short-term, the record itself must include complete information about primary care and reports from specialists, laboratories, and hospitals. Treatment plans must be clearly defined, and a responsible person identified.

COPC, in Dallas, has implemented a computerized patient record system. In the West Dallas C&Y Project, a client tracking system identifies children who have missed scheduled appointments so they can be brought into care. The Bronx Health Plan uses financial incentives to promote the maintenance of good records. Contractual arrangements with specialists stipulate that payment is contingent upon the primary care provider's receipt of a written report. The medical director of a health clinic under contract to the Plan is more likely to receive a timely report from a specialist for a Plan-enrolled patient than for an unenrolled Medicaid-eligible patient seen by the same specialist in an outpatient clinic.

Portable, duplicate medical records are sometimes used in urban settings where families seek medical care for their children from multiple providers.[23] Although the portable record is not a substitute for a continuous source of comprehensive health care, its use in the United States and developing countries has been associated with improved immunization compliance.[24] Portable records should be examined more systematically as tools to help parents and providers meet recommended preventive care guidelines.

### Create financing mechanisms that facilitate continuous eligibility.

Financial guarantees that cover service costs are essential. Poor families often lose health insurance when employment changes, or they have periods each year when their eligibility for Medicaid changes. Unless children are enrolled in a health system that adjusts to a family's fluctuating financial status, continuity of care is seriously jeopardized. In Mississippi, health department clinics and community health centers try to schedule all EPSDT screenings during periods of Medicaid eligibility. They help families anticipate changes and compensate for them. CHIP brokers the enrollment of eligible infants and children with individual physicians participating in the program. It combines Medicaid and other sources of funding to help children who lose their Medicaid eligibility stay with their providers. CHIP handles changes in eligibility status for enrollees and adjusts the billing arrangements, rather than asking parents to negotiate with individual physicians.

**Unless children are enrolled in a health system that adjusts to a family's fluctuating financial status, continuity of care is seriously jeopardized.**

## Accountability

Health care programs serving large numbers of people with public monies must strive simultaneously to assure quality of care and to avoid unnecessary costs. The scope of quality assurance usually varies—from reviews of the adequacy of treatment provided for certain common conditions to assessments of the impact of the care on hospitalization rates and health status outcomes in the target population. Unfortunately, few of these approaches are tailored to the needs of infants and young children, especially those with stressful family situations that place them at higher risk for injuries, preventable illnesses, or emotional problems.

Organized health care systems may not guarantee quality care, but they offer greater protection for the health care consumer than do practitioners working alone or in small private clinics. Most organized systems, for example, have procedures for dealing with patient grievances, and they set minimum standards for the physicians who participate in the system.

Many trade-offs are involved in improving the quality of care. State governments try to avoid setting standards that may be costly to implement and to monitor, and that may drive providers out of business. Providers receiving federal and state funds struggle to meet regulations that stipulate whom they can hire, how they must keep records, and what service statistics they must report. Yet states need to set standards that assure quality, and to establish mechanisms for monitoring and enforcing compliance, especially ones that assure that infants and children from poor families receive services of appropriate intensity and scope. Patients themselves may not be concerned about a program's adherence to formal standards of quality; they are more interested in receiving respect, kindness, and clear explanations from a physician or nurse.

Ways to improve accountability include the following:

### Strengthen management information systems.

Some primary health care programs serving low-income families with young children have developed management information systems that computerize medical records, billing, and, more recently, the reporting of conditions and indicators of interest among the client population. Programs with more than one clinic site sometimes develop a database that integrates billing, medical records, and practitioner and patient management information. Programs that hire computer programming consultants to create customized systems do so at enormous expense, unless they pool resources with other providers to share costs and use the same product. This situation is not likely to change without wider diffusion of health care computer program models organized around a core set of components.

The Bronx Health Plan, New York City

Few of the programs featured in this report have fully integrated management information systems as yet. They monitor quality of care largely on the basis of audits of medical records for specific conditions of interest.

The Dallas COPC management information system, still in the final stages of development, will eventually permit outcome and utilization reports, as well as

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interim management and financial reporting. The South Carolina health department's system captures individual patient activity statewide. All patient encounters are entered, including immunizations, home visits, and nutrition and social work activities. Data can be linked with birth and death files for those patients registered with public health departments. The state's Regional Perinatal Surveillance Data system monitors trends on key indicators for access to prenatal care, infant mortality, and low birthweight. The Jackson-Hinds Comprehensive Health Center, in Mississippi, has begun to monitor regularly the immunization status for enrolled infants and children, pregnancy rates for enrolled adolescents, and birth outcomes for women receiving prenatal care. Healthy Start in Hawaii, through its computerized client tracking system, monitors the child's immunization, developmental, and child abuse and neglect status, as well as utilization of community services.

## Establish quality standards and monitor compliance.

Setting and enforcing quality of care standards is slowly evolving from an art to an applied science. Many groups set standards—state regulatory agencies, state and federal funding agencies, and local or regional health care organizations. The scope, purpose, and methods of enforcing standards vary enormously, however, depending on the mission of the funding agency and the type of provider funded or regulated. National and/or state health care reforms may introduce some order and consistency in standards for the content and utilization of care.

Local health care providers do not generally develop their own quality of care standards. Many rely chiefly on recruiting and hiring qualified physicians, and some conduct periodic chart reviews for common pediatric illnesses to see if diagnosis, treatment, and follow-up are recorded appropriately in a sample of medical records. Larger health care organizations or networks may review compliance with standards regularly in order to comply with state contracts. Few, however, monitor the use of preventive services by enrolled children and compare it to national survey data or to the American Association of Pediatrics (AAP) guidelines for pediatric care. As noted above, Hawaii's Healthy Start monitors service utilization for families in the program. Still fewer examine health outcomes for enrollees.

Three of the programs featured in this report—the Jackson-Hinds Center, the Dallas COPC Program, and the New York City PRCs—have articulated quality assurance standards for child health care. Their experiences can inform state agency efforts to set standards for new managed care plans, as well as help local health care organizations decide whether to undertake similar efforts.

The PRCs were established with the explicit goal of providing enhanced services to high-risk infants and children. They set minimum standards of comprehensive care for common presenting risk conditions affecting infants, young children, and adolescents, and elaborated three levels of severity and several types of assessments for each level associated with each condition. Methods for assessing six elements of quality were developed, using a random chart audit system. The elements are accessibility, availability, comprehensiveness, continuity, coordination, and accountability.

Standards of comprehensive care at the PRCs address the situation of the child in relation to the family and caregivers. For example, being a child of adolescent parents is a priority condition. Second-level severity situations include frequent episodes of illness, lack of a good parent-child relationship, social isolation, and foster care placement. Infants and children to whom these circumstances apply are to receive, at a minimum, physical, nutritional, and developmental assessments by qualified practitioners, plus social worker contact, a home visit, and referral to a parenting program. Some of the programs also set productivity standards. For PRCs, 2,800 encounters annually for a full-time pediatrician are considered appropriate—considerably fewer encounters than the federal standard of 4,200 set for community health centers—because of the complex high-risk medical and social conditions among children referred to the program.

## Set specific objectives regarding staff performance.

Health professionals who work in a program committed to providing quality care should receive incentives, as well as regular feedback about their performance. Incentives for providers serving low-income families might include professional development and continuing education opportunities, clinical faculty appointments, and encouragement to conduct applied research, in addition to monetary rewards.

The financing and billing arrangements for The Bronx Health Plan help assure both financial and professional accountability. The Plan enforces minimum standards for record keeping and data reporting. Practitioners are accountable to the program. The Plan rewards participating primary care physicians for good end-of-year fiscal outcomes by distributing salary bonuses from the savings achieved. The Dallas COPC Program has salary incentives for professional staff performance as measured by 25 health outcome indicators. The Program adopted these indicators after discussion among physicians and other health professionals. It also set appropriate baseline measures, agreed on a time frame for each, and identified ways to achieve them.

COPC outcome objectives for young children include the following:

- Decrease emergency room visits secondary to the complications of asthma by 5 percent
- Decrease the incidence of measles cases by 5 percent
- Decrease the incidence of impetigo by 5 percent
- Decrease the incidence of emergency room visits for minor and major injuries by 5 percent

Quality of care at the Jackson-Hinds Comprehensive Health Center is assured by periodic federal agency reviews and the Center's accountability to a community board that includes active patients. The staff sets health status goals for the community, in consultation with the board, and develops corresponding actions to achieve them. To reach the goal of raising immunization levels among children in Hinds County, the Center conducts monthly reviews of medical records of clinic enrollees within two months of their second birthdays, contacts the parents of "delinquent" children, and conducts immunization campaigns in selected low-income housing projects every three months.

## Train and retrain staff.

In current primary care practice, providers often give insufficient attention to preventive care. This lack is traceable, in part, to medical schools' lack of emphasis on preventive care. Today's physicians need additional training to become more sensitive to issues related to the social, cultural, and economic environment, and to child development and safety.

Clinicians need better training in identifying the conditions that accompany poverty—such as substance and alcohol abuse—and that impair the caregiver's capacity to handle a child's health needs. They must also be alert to signs of family violence, which can affect children's emotional and physical health. Physicians must be able to recognize symptoms of lead poisoning, nutritional deficits, and, for new immigrants, diseases endemic to their countries of origin. Training can keep physicians up to date on preventive practice, emerging diseases, and conditions that disproportionately affect a particular population (such as HIV and tuberculosis).

AAP recommends that providers take into account the needs of a child's caregiver for guidance. The programs studied here demonstrate several ways to incorporate advice to parents about child care into a service system for children—including training physicians, adding nurses or other counselors to the staff, and closely collaborating with county public health nurses.

Hawaii's Physician Involvement Project, led by the state AAP chapter and funded through an MCH Bureau grant, began in 1987 to develop strategies that promote greater physician awareness of and competence to address preventive health needs of children at risk. The chapter has organized continuing education courses for pediatricians, activities to promote physician awareness of community-based services that support families and help them adopt healthier behaviors, and public education that involves

**Clinicians need better training in identifying the conditions that accompany poverty—such as substance and alcohol abuse—and that impair the caregiver's capacity to handle a child's health needs.**

physicians in lobbying for state policy changes to improve the health of children in poor families. Lobbying efforts helped to increase Medicaid reimbursement for EPSDT visits from $17 in 1985 to $95 in 1989, and to pass 1988 legislation requiring private insurance companies to cover well-child supervision for children up to five years of age.[25] The medical society also encourages private practitioners to serve poor children.

Lexington's Family Care Center incorporates specialty medical training and dental, nursing, and social work education into all aspects of care. Children at increased social or medical risk are the focus for case finding. All of the professionals in training participate in case management, interdisciplinary case conferences, family-oriented care, and management of children with special health needs. This program should, over time, have a profound impact on the University of Kentucky's ability to train physicians and other health care professionals interested in ambulatory care and the needs of disadvantaged children.

## Community Orientation

Organizing primary health care to meet the needs of a defined population is a concept that has been promoted for many years, especially in developing countries, where most families are poor. A community-based and community-oriented system of preventive and acute health care services has never been fully articulated for the United States. However, several programs and state or regional planning processes have put discrete pieces in place. For example, community health centers were first funded in the mid-1960s to provide primary health care to medically underserved communities, establishing community-based governance to assure that the centers addressed priority health problems of the community.[26]

In the early 1980s, the Institute of Medicine convened several groups to examine the applicability of "community-oriented primary care" to the United States. The Institute published several reports and developed an operational definition.[27] It considered several functions essential to community-oriented primary care, as follows:

- Defining and characterizing the community
- Identifying the community's health problems
- Modifying health care programs in response to the community's health care needs
- Monitoring the impact of program modifications

Today, MCH leaders recognize that strong federal and state leadership and oversight facilitates the creation of systems of health care that respond to community needs and to variations in need among communities. Federal and state public health agencies should be responsible for planning, technical assistance, standards setting, and funding of services to fill in the gaps, even though these roles may change somewhat with national health care financing reform. A state public health agency that carries out these roles effectively can promote local systems responsive to local needs. For example, the South Carolina health department sponsors an initiative that brings together its health districts' public health professionals with private-practice providers to assess needs and work to create medical homes for children in poor families.[28]

Approaches to enhance community orientation include the following:

### Determine community needs.

Community needs assessments are far from routine or simple, but they can guide the development of responsive local health care systems. Conclusions may vary widely, depending on which organizations sponsor the data collection and analysis, and why. State information is available, usually by county and often by census tract, on low birthweight, births to teenagers, infant mortality, and prenatal care usage. Many states provide needs assessment tools and information on service utilization that permit comparison among counties or municipalities. Indicators of access to primary care, however, such as percentages of Medicaid-eligible individuals who are enrolled, proportion of primary care physicians who accept new Medicaid patients, and immunization rates for two-year-olds, are rarely available in smaller areas without special surveys.

Some type of community needs assessment preceded each of the programs described in this report. Methods ranged from a series of structured meetings between representatives of community organizations to extensive statistical analyses, surveys, and focus groups. The purposes of the needs assessments were usually multiple, including preparing the evidence to convince state or county legislatures to fund new services, to meet grant application requirements, to identify areas with the greatest dearth of services and concentration of needs, and to determine priorities for action.

The Dallas COPC Program undertook a needs assessment so that health clinics could be placed in areas of greatest need, and services could respond to identified needs. Data, collected and analyzed for standard statistical communities (aggregates of census tracts), included demographic information, traditional measures of underservice, infant mortality, and prevalence and incidence rates for specific diseases and injuries.

In Lexington, Kentucky, discussions about the need for comprehensive health and social services for disadvantaged families had taken place for 18 years before a formal needs assessment and planning process began. University physicians noticed that many of the toddlers they treated in the hospital's outpatient program returned as adolescents in juvenile detention. Three task forces engaged in planning: adult education, social services, and health care. The process enlisted seven official sponsors and multiple state agencies to create a facility that provides integrated services.

In Hawaii, a growing number of child abuse and neglect cases, many of which were linked with emotional and physical health problems, stimulated health and social service agencies to action. A prominent physician and a nurse trained in recognizing risk factors associated with child abuse and neglect developed the Healthy Start initiative as a demonstration home-based intervention program, whose success in reducing the number of cases of child abuse and neglect in high-risk families convinced the state legislature to appropriate funding for program expansion.

## Market and orient services to the community.

Comprehensive health care programs serving low-income families must reach out to families not accustomed to participating in a system of care. In urban areas, providers encounter "competition" for treating sick children from hospital emergency rooms, or home remedies and advice offered by friends. In rural areas, new providers might have to contact parents repeatedly in order to overcome distrust. Parents whose infants are born at a major medical center far from home, and who return to the center periodically to obtain care for the infants' special health needs, may be unaware of community-based primary care programs located closer to their homes.

The Dallas COPC Program has actively recruited enrollees from nearby neighborhoods. The program adapted the National Health Interview Survey instrument for use in Dallas, and trained Vista volunteers to conduct the interviews. Results helped target outreach efforts. COPC also sponsored a series of focus groups in East Dallas to find out what the community wanted and expected from health care services. Traveling teams from COPC now visit public schools regularly through an agreement with the Dallas Independent School District. The Parkland Hospital HOMES (Homeless Outreach Medical Services) Project, which operates two mobile vans, treats thousands of patients at 11 shelters throughout Dallas and enrolls many in the COPC system when they find housing.

The Bronx Health Plan also conducts outreach to enroll new patients. Recruiters regularly visit local welfare offices and community health centers, looking for new clients. They explain the purposes and advantages of the Plan at length to prospective enrollees. The Greenville hospital system in South Carolina has been very successful in enrolling pregnant women and infants on Medicaid. Outreach workers stationed within the hospital at key intake points help families understand the Medicaid forms, obtain required documentation, and speed the process through the welfare offices.[29]

**Community needs assessments are far from routine or simple, but they can guide the development of responsive local health care systems.**

### Assess the impact of the program on the community.

State and local programs sometimes measure their performance in terms of improved health outcomes for target areas. The federal Healthy Start Program, one of the largest current examples, has funded 15 communities to reduce infant mortality. Both public and private funders want evidence that their new or improved programs improve health outcomes for the entire target population, not just for the people who readily seek services and who may have other resources. Evaluations must therefore look at the extent to which groups at highest risk within a program's catchment area receive the services, and also look at the effectiveness of services in improving health status. Impact indicators are difficult to obtain without conducting special studies and collecting new data, but analyses of state and county hospital discharge records can reveal whether hospitalization rates have declined for those conditions sensitive to ambulatory care.[30] A lack of management information systems limits studies, however.

Both COPC and the Jackson-Hinds Comprehensive Health Center conduct periodic studies, surveys, and analyses of health outcome information in their communities. The state programs in Mississippi and South Carolina monitor birth outcomes and immunization rates to determine the effectiveness of their enhanced prenatal and infant services.

All of these evaluative studies provide valuable feedback to both health care providers and funders, despite the lack of matched control groups. Hawaii monitors rates of child abuse and neglect among families and communities served by Healthy Start and among families not receiving services. Healthy Start has justified continued state funding by demonstrating program effectiveness in terms of improved family functioning and lower-than-expected rates of child abuse and neglect among families who receive services. Although the program has not yet secured funding for a controlled evaluation, it has documented rates of child abuse and neglect among nonparticipating families who were assessed as high-risk at the time of a birth; the group without services experienced a rate approximately three times higher than that among high-risk families who did receive services.

## RESTRUCTURE HEALTH PROGRAMS TO MEET THE NEEDS OF CHILDREN

The specific structural features of the programs studied reinforce service quality. These features may not be absolutely essential to comprehensive quality primary care programs, but they do enhance them. While many approaches could be identified, the following appear to be worth pursuing in other communities:

### Organize local health care systems to respond to changing needs.

Although stand-alone community health centers and private practitioners can offer quality care for low-income people, larger local systems have unique advantages. The local systems identified in this report have several features in common, which suggest an operating definition or a continuum of system characteristics, including the following:

- Services are delivered in multiple sites to a geographically defined target group.
- An overall coordinating body brokers services to the target group.
- A public/private partnership organization secures and administers funding.
- The content of some services is stipulated for the target group.

Some strategies for improving programs are possible only at the community systems level. For example, more efficient services occur with economies of scale, staff sharing and recruitment, linked databases, and the setting of standards. There are several benefits to membership in local systems:

**Communitywide planning.** Communitywide assessment—to determine local needs and resources—provided the foundation for the Dallas COPC planning and implementation efforts. As a result, four community-based health centers serving the target population were merged under the COPC umbrella, in order to increase efficiency, and a health center was constructed in a high-need, underserved area.

Similarly, The Bronx Health Plan utilizes many of the strengths that were already present in a community health center affiliated with Montefiore Medical Center. Collaboration among its participating providers was established by a broad-based coalition of groups working with the affiliated medical faculty to address many unmet community health needs.

**Physician recruitment.** Several state and local programs have employed successful strategies to enable private primary care practitioners to accept low-income patients. CHIP's solution includes a centralized referral organization, as well as patient education and social support. State programs in Hawaii and South Carolina offer financial incentives and education to private practitioners so they will provide the type of care appropriate to the risks that infants and children from low-income families experience. These programs increase physicians' willingness to accept low-income clients through peer education and assurances that the at-risk families will be equitably divided among private practitioners. Such strategies will not, of course, work in rural medically underserved areas, where there is an absolute shortage of practitioners. In these cases, stronger federal and state leadership is required to develop solutions.

**Management information systems.** Up-to-date information about all the services that infants and young children in the target population receive facilitates coordination and timely referrals. In a successful pilot program in three South Carolina health districts, information in the child health and WIC data systems has been integrated to target WIC children who are not up to date on immunizations. When mothers pick up their WIC vouchers, staff members refer to a computerized database to ascertain the children's immunization status. Any needed vaccines are then administered at the WIC site. Similarly, computerized information for program monitoring and evaluation is a distinctive feature of the PRC network.

**Access to specialty care.** Panels of specialists who agree to participate in a community system of care can improve access for both the referring physician and the patient. The Bronx Health Plan noticeably increases access to specialty care for Medicaid clients through the payment of enriched fees—made possible by other system efficiencies. Contracts with a panel of specialists provide enrollees access to office-based care (which would otherwise be unavailable) and promote communication between primary care physicians and specialists. The Dallas COPC similarly has contractual arrangements with specialists affiliated with the University of Texas Medical School.

**Although stand-alone community health centers and private practitioners can offer quality care for low-income people, larger local systems have unique advantages.**

**Stabilized funding.** Dedicated county tax support has helped to stabilize funding for some of the state and local systems. In some cases, the system's origins as a public/private partnership helped garner political support for local or state funding. Hawaii's Healthy Start Program has high visibility within the state legislature, which has increased its funding each year. A county ad valorem tax assures a minimum funding base for the Dallas COPC. The incorporation of community health centers into the COPC system saves administrative overhead costs, making possible a reinvestment in services not usually reimbursable by third-party insurance—such as outreach, health education, social services, and nutrition.

The programs featured here also illustrate alternative approaches for linking low-income children and families to comprehensive health and social services. Health care providers often serve as coordinators of systems of care for infants and young children. However, they can also be essential partners in systems with other services available in the community. A network of family support centers, which have no direct health care services capability, operates Healthy Start in Hawaii. The centers are responsible, however, for making sure that infants and children utilize a primary care provider appropriately, and they check to see that services have been received. Roanoke's CHIP is a hybrid organization that provides few direct health services. Rather, it supplies the funding, management, and case management services that help physicians address enrollees' health needs. In New York City, an intermediary organization, the Medical and Health Research Association, manages the PRC Program and contributes oversight, quality assurance, and some of the information needed for case management.

## Incorporate case management or care coordination.

Case management, or care coordination, is an integral program component for programs offering a wide range of supplementary services. It is also helpful to families having to overcome multiple barriers to obtain care—barriers such as language, transportation, child care, and eligibility. Case management, or care coordination, helps to assure quality primary care for children living in disadvantaged circumstances by addressing the family's multiple needs and by tracking children to make sure they receive recommended services.

Most of the programs considered here have case managers on staff. However, outside organizations provide these services in programs where private practitioners provide much of the primary care to low-income children. For example, in Virginia, private practitioners have agreed to provide CHIP patients with a medical home—using the case management and family involvement support services provided through a partnership with the health department and community action agency. Similarly, physicians in Hawaii who care for children enrolled in Healthy Start coordinate their acute medical care needs, but the program's home visitors and public health nurses monitor the children's use of preventive services and help mothers learn to be health advocates and care managers for their children.

## Involve hospitals in local systems.

Hospitals, functioning as sponsors or partners, are crucial to the success of quality primary care programs, whether the local programs are freestanding or larger systems. In some programs, medical residents offer primary and preventive care directly; in these and other programs, hospital linkages extend the continuum of services through specialty and inpatient care. Hospitals also provide administrative support. In programs in inner cities, the outpatient departments of hospitals are involved because there are few alternative health care resources for poor families.

The Jackson-Hinds Comprehensive Health Center has strong linkages to several area hospitals. Since all Center physicians have admitting privileges to at least one of the three local hospitals, they can follow up directly on hospitalized patients. Also, the Center provides outreach to new mothers with high-risk infants at these hospitals. Linkages with the University of Kentucky Medical Center promote access, continuity, and comprehensiveness for patients at the Family Care Center; the latter's clinic is staffed by seven residents from the medical center, which also provides emergency care, hospital care, and subspecialty care.

Family Care Center, Lexington, Kentucky

In Dallas, COPC and Parkland Memorial Hospital are integrally related. In addition to providing inpatient care to COPC patients, Parkland provides supplies, personnel, security, purchasing, and business accounts. In New York City, four of the nine PRC sites are housed in municipal hospital outpatient departments, and three sites are freestanding facilities operating under the auspices of voluntary teaching hospitals. For CHIP, which does not have funds to pay for hospitalization and specialty care, the lack of hospital involvement has been a program weakness. Although CHIP uses a local hospital's free specialty clinic, the Project is looking for ways to pay participating specialists. Formal linkages with a hospital would enhance both comprehensiveness and continuity.

# Strategies for Developing Comprehensive Primary Care Systems

State and local health care systems innovators share both hope and frustration as they exchange information about helping to connect low-income children to ongoing health care. While they recognize that progress has been made in some communities in developing comprehensive primary care systems for poor families with young children, their concern mounts as remaining barriers prevent expansion or wider adoption. Issues of financing, health service infrastructure, and provider reimbursement have become serious obstacles to systems development of any scale.

Health care reform efforts must address these problems simultaneously at the national, state, and local levels. In addition, wider dissemination of information about promising state and local strategies for delivering high quality pediatric primary care to low-income families can promote partnerships between public and private health care providers and a variety of nonprofit human service organizations, including schools and child care organizations.

## NATIONAL HEALTH CARE REFORM

National leaders, including professional associations, politicians, commissions, and scholars, have made numerous calls for a fundamental reform of the social contract to assure health care to all Americans. The urgency and frequency of these analyses have increased as more and more middle-income citizens have found that they, too, cannot purchase health insurance for their families and cannot change jobs without jeopardizing their insurance status. State governments and business leaders worry about the national burden of health care costs, which are a growing proportion of the gross national product—about 13 percent for health care.[31]

Two recent publications recommend that any national health care reform proposal address adequately the comprehensive health needs of all mothers, infants, and children. Both stress that health care financing reform alone will not assure the availability of appropriate, high quality preventive, primary care, and specialty services to low-income families. Health professionals and policymakers concerned about this population should examine these proposals for their probable impact with regard to creating and strengthening primary care systems that offer quality care to low-income families.

The first report, *Including Children and Pregnant Women in Health Care Reform*, published by the National Research Council, summarizes seven major reform proposals.[32] It also comments on the extent to which each proposal addresses goals on four major topics: health insurance, health service resources, administration, and cost management and quality assurance. The report indicates that none of these reform proposals contain provisions that will advance all of the goals, and few consider implementation issues. Nor do most of the proposals address the role of federal agencies that have responsibilities for financing, research, disease control, and manpower development—roles that affect the way resources are allocated within the federal and state Title V programs. Moreover, few address the impact of the proposals on federal programs that serve a large proportion of the medically indigent population—such as community health centers, the National Health Service Corps, and state and special grants from the MCH Bureau.

The second publication, *Maternal and Child Health Framework for Analyzing Health Care Reform Plans*, prepared by the Association of Maternal and Child Health Programs, assists in the review of national health care reform proposals.[33] Dual emphasis is placed on systems infrastructure for MCH disease prevention and health promotion, services planning, provider/service availability, quality assurance, and coordination; and criteria for personal health services coverage and administration. The framework highlights four principles for health care reform, including universal access, consumer and family involvement, and the development of organized delivery systems for health care and support services. Two subsequent publications of the Association of MCH Programs applied this framework to five national health care reform proposals and elaborated a tool based on the framework that may be used to analyze new state or national proposals.[34]

National health care reform goals should pursue the following objectives:

### Assure universal financial access to comprehensive personal health services.

Continuous coverage for the full range of services that low-income families need is essential to reduce the fragmented and episodic care they currently receive. Such national policy reform will encourage appropriate care for high-risk adolescents, pregnant women, and infants who, in order to benefit fully from medical intervention, may need social services, case management, mental health services, and substance abuse treatment.

### Simplify and revise administrative procedures to reward efficient, consumer-oriented systems of care.

The programs described in this report have struggled to overcome many built-in obstacles to the systems concerning Medicaid eligibility determination, reimbursement rates, and billing arrangements. Removing those obstacles could free programs to concentrate on serving more clients more effectively, as well as encourage other providers to serve low-income families. At the national level, more attention should go to developing and evaluating mechanisms for assuring low-income families' access to high quality services.

### Expand health care infrastructures to cover all underserved populations.

Many counties and inner cities in the United States have inadequate primary care resources for low-income pregnant women, infants, and children. Primary care physicians, midlevel practitioners, and social support services are in short supply. The supply of primary care physicians has declined, relative to the population size and relative to the supply in other industrialized countries, while the percentage of physicians in primary care has plummeted to less than 35 percent of all practicing physicians.[35] The general consensus seems to be that the supply of primary care providers needs to be increased in underserved areas by reversing the current incentives in the reimbursement system that encourage the majority of physicians in training to choose subspecialties over primary care.

### Strengthen public health agency roles in the planning, delivery, and monitoring of health status and services for mothers and children.

Federal responsibility for MCH services is centered in the Title V MCH Block Grant Program, with state responsibility for implementation within the broad mandates of the program. The current mission of Title V encompasses most of the roles required to monitor health status and services and to plan and evaluate policies and programs for improved state and local systems. The 1989 OBRA amendments to Title V reinforced its responsibility for assuring health care to all mothers and children.

## STATE POLICIES AND PROGRAMS

State policies and programs that affect the organization and delivery of health services to infants and children are largely authorized under the federal Title V legislation. State Title V agencies, or MCH agencies, as they are called, assess needs, plan, finance, and monitor health services for needy populations that might otherwise not receive preventive and primary care. They exercise their functions, through regulatory activities, reporting, monitoring, technical assistance, grants, and contracts, and by providing direct services in some cases.

### Strengthen the roles of state health departments.

During the 1980s, several factors affected the roles of state MCH programs in assuring development of comprehensive health systems for children. The enactment of the block grant was accompanied by diminished federal leadership, assistance, and monitoring. State statutory authority for MCH was uneven and largely categorical. The missions of state public health agencies tended to emphasize prevention rather than primary care. State-supported child health services often did not include acute care, and not all states routinely assessed needs for the entire population.

The 1989 OBRA amendments clarified state Title V responsibility for promoting systems of comprehensive care for children with special health needs, but they did not specifically address systems development for other underserved groups. They did stress states' roles in collecting, reporting, and using planning information about health status and access to care. Statutory phrasing, related to primary care for children and to Medicaid coordination, was also strengthened, and the program purposes were linked to the year 2000 objectives for the nation. State leadership was stressed, but federal appropriations for Title V did not increase commensurately with expanded responsibilities. As a result, states now experiencing fiscal crises are having difficulty meeting the primary care needs of poor mothers and children.

State health departments require additional resources to implement recent legislative reforms and to meet the primary care needs of low-income groups. Their statutory mandates must be strengthened and integrated with health care reform to specify a continuing authority for developing, supporting, and monitoring MCH services. State health departments would also benefit from consistent guidance and increased technical assistance from the federal government.

Strengthened state Title V agencies could do much more to help communities develop comprehensive systems of primary care. The efforts of many states to reduce infant mortality and provide access to primary care for high-risk women and children illustrate the proactive role that states can take, but they frequently fall short of achieving systemic changes in the local primary care infrastructure. Nevertheless, Title V agencies can be effective change agents in the following areas:[36]

**Strengthened state Title V agencies could do much more to help communities develop comprehensive systems of primary care.**

**Conducting needs assessments.** The 1989 OBRA amendments strengthened and specified requirements for Title V to conduct comprehensive needs assessments and planning in states, with the goal of promoting the development of community-based systems of care. Information about immunization coverage, low birthweight, and access to prenatal care is available in many states, along with other indicators of health status or utilization of services; in some cases, information about utilization of WIC, Medicaid, and prenatal care has been matched for individuals to assess pregnancy outcomes.[37] As capabilities for collection and analysis of state, county, and small-area data improve, demand for locally relevant information about children's access to primary health care should increase commensurately. Title V agencies should strengthen their capabilities to respond to this type of demand, providing data and assistance to communities in conducting assessments, as well as creating the overall state assessment that should guide state policy and planning to support local systems.

**Funding direct services.** State health departments use grants and contracts to fill in gaps or enhance services to mothers and children. CHIP, for example, has received $500,000 annually from Virginia's Title V agency. Grants and contract funds are subject to some federal restrictions, and they are insufficient to assist those local communities with few resources to develop comprehensive primary care systems. Additional state funding, however, greatly enhances possibilities for action. For example, Hawaii's Healthy Start Program, with a state-appropriated budget of about $6.3 million in fiscal year 1991, contracted with seven private community agencies to serve more than 2,800 high-risk families. In the future, as health care financing becomes universal, states could use grants and contracts strategically to develop service capacity in underserved areas, develop and test new service models, and supplement and enhance services that are not financed through insurance.

**Assuring quality.** State Title V agencies set standards for maternity and pediatric care for services provided with Title V funds. State MCH programs also have influenced the application of similar standards to services financed by Medicaid. They have worked with Medicaid agencies to set reimbursement policies for primary care services and determine the content of the benefit service package, to certify and recruit qualified providers, and to audit and monitor the utilization and quality of care, including EPSDT services. Title V agencies have taken the lead in improving the quality and management of perinatal services to poor women. Mississippi, for example, sets standards and monitors implementation of the PHRM/ISS Program with local health departments, as well as private providers.

**Providing direct services.** Many state MCH programs directly provide preventive health care services to infants and children, including immunizations and well-child checkups, through district and local offices. Some state health departments also (or only) support services through contractual agreements or grants with local health departments and nonprofit provider organizations. Southern states have invested most heavily in direct services to pregnant women and infants to improve prenatal and perinatal care. Lack of physicians and other comprehensive social and support services influenced this decision. In many areas of the country, however, direct services provision may not be the wisest use of Title V resources if other financing and organizational options are available. If health care reform adequately assures universal financing and includes measures to increase providers available to underserved communities, it is likely that the direct provider role will diminish.

**Consolidating or leveraging resources.** Local providers who wish to develop new service relationships with public health departments may find that this can be facilitated by support from the state MCH director. The MCH program can also leverage funding by providing start-up or ongoing support for services that third-party insurance funding will not cover and, in some cases, by brokering private foundation funding. Local agreements between the public health and the welfare agencies may be required to expedite Medicaid and EPSDT enrollment, but a good relationship at the state agency level can help. Federal waivers are often required to target a portion of the population for enhanced Medicaid benefits. The state MCH director must work actively with the state Medicaid director to obtain the waiver. For example, Kentucky's department of health prepared justification to change Medicaid reimbursement policies for preventive services and helped Lexington's Family Care Center obtain a waiver for certification as a federally qualified health center, so that full-cost Medicaid reimbursement would apply.

Brennan's Health Connection, New Haven, Connecticut

**Expanding and developing service capacity.** As Title V agencies achieve success in efforts to improve prenatal care, they should also apply lessons learned to enlist providers to serve children from poor families. One approach is to finance and broker the support services that enhance the content of care; the other is to work with the state Medicaid agency to promote provider participation in Medicaid. Some state agencies already implement strategies for enhancing Medicaid rates for pediatricians who agree to be the medical home for Medicaid-eligible children, and some federal and state agencies sponsor the recruitment of physicians to rural areas through incentive packages. In states where licensing policies discourage the employment of nurse practitioners, health departments should work to reform regulations and create employment and training opportunities for nurse practitioners.

### Make Medicaid work for children in poor families.

States increasingly find it difficult to identify resources to use in securing a state/federal match for Medicaid, and recent tightening of federal rules about sources of matching funds exacerbates this situation. However, states should use federal Medicaid financing more creatively to meet gaps in primary care and support services that infants and children from poor families need—with the goal of preventing medical problems that prove to be far more costly if left untreated. Even if national health care reform transforms Medicaid, the national health plan may include a public insurance plan that closely resembles it. In the meantime, national MCH and advocacy organizations are encouraging states to pursue strategies that maximize Medicaid funding.[38] Specifically, states can enroll more eligible infants and children in Medicaid; expand the range of services by implementing EPSDT and P.L. 99-457; and use provisions in the 1989 OBRA amendments to obtain full-cost Medicaid reimbursement for federally qualified health care centers or similar facilities, including health departments.

Some of the programs featured in this report are actively pursuing these financing options. Their success depends largely on the nature of the working relationship that exists between the state Title V director and the state Medicaid director, as well as on the service providers' ability to access Medicaid at the local level. Many barriers still exist. For example, Virginia's CHIP, which has been facilitating enrollment of infants in Medicaid and obtaining case management reimbursement for those infants and toddlers who qualify for the optional targeted provision, has been unable to bill routinely for expanded services to EPSDT enrollees because state regulations are highly restrictive.

## EXPANSION OF PROMISING LOCAL EFFORTS

The prospects for developing comprehensive systems of health care for disadvantaged infants and children in the community are improving. Three prerequisites must be kept in mind: resources, both fiscal and managerial; political and social support within the community; and an effective intervention.[39] After a decade of cutbacks in federal funds for MCH, federal and state resources and attention are now focusing on health, as well as other early intervention services for poor families with young children. Political leaders faced with a continuing economic recession and the specter of urban rioting by long-neglected youth appear to be more willing to consider revitalizing (on a bipartisan basis) the infrastructure of preventive and basic health services. There is ample documented evidence and growing public awareness that comprehensive health care can prevent or ameliorate learning difficulties, as well as medical problems.

**There is ample documented evidence and growing public awareness that comprehensive health care can prevent or ameliorate learning difficulties, as well as medical problems.**

Many private health care providers do not see their mission as delivering quality personal health care services to poor families. For historical, statutory, and economic reasons, they believe that primary health care is not their responsibility. Financial incentives may lead some providers to gear up for a high volume of low-quality services to infants and young children from poor families. For example, many hospitals receive higher Medicaid fees or reimbursement for "nonemergent" emergency room visits than they would for an outpatient department visit, but the resources actually used to provide care are comparable. One project contact suggested using the following approach with recalcitrant institutions: "Try inspiration first, then intimidation." This community-organizing technique reportedly has worked with groups of providers who fail to recognize that providing quality services to low-income members of the community will bring them financial as well as political rewards in the long run.

Promising local program models remind us that reforms of federal and state health care policies and programs eventually will be implemented at the local level. Their experiences also show that state reforms often happen as a result of a local initiative that pressures state agencies for change. The locus of leadership and incentives for change may differ from community to community, and health departments, hospitals, business, community action agencies, or private practitioners can initiate systemic change. Private foundation resources and technical assistance can also help to expand and consolidate promising pilot efforts. But meaningful involvement of all stakeholders in needs assessments, planning, and implementation—with attention to the points described below—will help assure success.

## Build coalitions within the community.

Stakeholders in the organization and delivery of primary health care services to poor families and their children include the following: residents in the community, hospitals, Head Start, WIC, child care providers, health centers, solo practitioners, group practices, health maintenance organizations, insurers, politicians and other community leaders, public agencies (e.g., health and social service departments), professional associations (e.g., medical societies, nurses associations, and public health organizations), and advocacy groups.

Hospitals are key players in all community health systems by virtue of the services they provide, their size, the influence of their boards, and their financial base. Various problems have prompted their involvement in systems change. These include "crowded emergency rooms, the overflow of patients needing beds, the cost of unnecessary hospitalizations among the poor, and the deteriorating health status of low-income [individuals]."[40]

Increasingly, uncompensated care is driving hospitals to cooperate in seeking wider solutions. Parkland Hospital's need to alleviate severe overcrowding in its emergency rooms and outpatient clinics was a strong incentive in the development of its decentralized COPC Program. Montefiore Medical Center's desire to stabilize the funding base of five affiliated health centers was the driving force behind the development of The Bronx Health Plan.

Civic-minded community leaders, including practicing physicians and the board chairman of the local community action agency, were the spark plugs behind CHIP, in Roanoke, Virginia. Their common concerns led to meetings that enlisted the state public health department, a state senator, local community action agency staff, and the pediatric faculty from the three Virginia medical schools. As a result of this meeting, a task force was formed to develop the program model. Task force members, representing the business, legal, and religious communities, continue to provide guidance to the project.

## Strive for institutional change and commitment.

The strongest community-based programs administratively are based in institutions fully committed to providing high quality comprehensive health services to poor families with young children. Leaders of these institutions have been involved in planning, and they have facilitated financial and contractual arrangements with other participating agencies. These arrangements promote accessibility, continuity, comprehensiveness, coordination, and community orientation in care delivery.

Achieving institutional commitment and change is not easy, and it may depend on the values and attitudes of key individuals in leadership positions. Institutions in which power and leadership are fragmented, as in large hospitals affiliated with medical schools, often prove highly resistant to change. Meanwhile, physicians in private practice are more effectively reached through third-party organizations or networks that represent large numbers of patients.

Community and state groups seeking systemic change must consider alternative ways of enlisting the support of groups and institutions that represent health care providers, including the creation of a new organizational structure that can coordinate and integrate the services of major health care institutions. Large health service institutions generally respond well to financial incentives, new linkages with community-based organizations, and opportunities to improve the quality of services and the productivity of practitioners.

The Greenville Hospital System in South Carolina offers a cogent example of institutional change in response to financial and social motivation. The system commissioned a study of the Medicaid eligibility process and recommended policy and procedural changes.[41] The report documented that 41 percent of pregnant women receiving AFDC and applying for Medicaid were not approved, most for failure to comply with procedural requirements. Solutions included an on-site eligibility unit; computer linkages with the county social services department, the clerk of court, and the health department; an outreach unit; an assured payment system piloted with the state health and Medicaid agencies; and case management for pregnant women and infants receiving Medicaid.

Institutional change can also occur among physicians in private practice who are reluctant to accept Medicaid. Adequate reimbursement is not necessarily sufficient to increase provider participation in Medicaid.[42] Primary care systems have implemented strategies to make participation easier, for example, by assuming administrative functions and providing the supportive services that increase patient compliance. Other strategies to encourage the meaningful involvement of physicians may include professional peer pressure, outreach by representatives of the Medicaid agency, and streamlined billing systems.

Virginia's CHIP effectively expanded the capacity of private physicians to enroll more children from low-income families. Nurse care coordinators and family intervention specialists (social workers) provide much of the health education, needs assessment, and logistical coordination high-risk families need. Through these extra efforts, in a 24-month period, the Project added 1,000 children to the practices of 36 physicians. Although physicians recognize that visits with CHIP children often take more time than those with other children, because CHIP enrollees' problems are more serious or more complex, the nurses reduce the burden on the physician by educating and assisting the parents.

## Seek win-win arrangements between organizations.

In 1986, Parkland Hospital's chief executive officer began planning a community-based system of care that would serve six high-risk Dallas County neighborhoods. He obtained county tax support for the initiative. In this way, COPC incorporated several freestanding community health centers and one C&Y Project, and it constructed one new primary care facility in southern Dallas. COPC is a component of the Dallas County hospital district and is governed by the district's board of managers. Physicians hired by COPC work in a group practice arrangement and have clinical faculty appointments with the nearby University of Texas Southwestern Medical School. Multiple funding streams enhance the basic services provided for all partners in the new system.

Many features of COPC would be widely applicable in a mixed urban/suburban or even rural setting. The hospital, primary care, specialty care, university, and public agency components have financial and administrative links. COPC is similar to a managed care prepaid health maintenance organization because the primary care physicians act as gatekeepers for hospitalization and referrals to specialists. The range of services is comprehensive and appropriate for low-income families, although case management is not available for infants and toddlers at high risk. Physician recruitment opportunities are optimal, because of the attractive combination of university and hospital affiliation, and involvement in promoting favorable health outcomes for the community.

For 20 years, the Jackson-Hinds Comprehensive Health Center has enjoyed continuity of leadership and strong ties to multiple state and local agencies. Its status as a federally qualified community health center by virtue of its grant from the former Bureau of Health Care Delivery Assistance (now the Bureau of Primary Health Care) entitles it to full-cost Medicaid reimbursement. Local hospitals, including the University of Mississippi Medical Center, receive referrals from the Center. Jackson-Hinds operates health clinics in a number of public schools, where it provides services that are aimed at reducing risk-taking behavior. It also participates in the state's Perinatal High

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Risk Management Program, referring high-risk women for delivery to its affiliated hospitals. Low-risk women will soon be able to deliver at a new birthing facility at the Center. Like most freestanding community health centers, Jackson-Hinds has had to struggle with chronic underfunding and to establish and maintain secure links to medical specialists and to hospitals. Today schools and community agencies widely recognize it as an essential service provider.

The Bronx Health Plan began in the early 1980s with a planning initiative designed to stabilize funding streams for the community health centers affiliated with Montefiore Hospital that were serving the surrounding neighborhoods. Today, a network of eight primary care practices, more than 100 medical specialists, and five voluntary hospitals participate in the prepaid managed care plan, which offers three health care coverage programs to more than 13,000 enrollees. The Medicaid plan, the managed care program for public assistance recipients, has been operational since February 1987. The board of directors of the independent, not-for-profit corporation includes the directors of the participating community health centers, three of which receive federal grants from the Bureau of Primary Health Care. A staff of 40 manages marketing, enrollment, billing claims, contracting, quality assurance, and medical management.

The Lexington Family Care Center was created more recently than the previous three programs as a collaborative effort among the county and state governments and the University of Kentucky Medical Center. The medical center pays medical staff salaries, while the Lexington-Fayette Urban County Government and the county health department fund all operating and support services. The University of Kentucky Medical Center also provides specialty services, while two private organizations provide mental health and speech therapy. Coordination among the seven sponsoring organizations has been difficult, but not impossible. The Center's mission of serving both medically and socially disadvantaged infants and children and their parents makes multiple links to service providers inevitable.

In most communities a local planning group or coalition has to strive to include all of the major organizations providing services to the target population. Generally, these organizations will have to change some policies and practices to create new service systems or arrangements that meet more of the needs of low-income families with young children. The group seeking change should identify incentives for the larger institution to expand its affiliations, invest new resources, or adapt its policies with regard to providing accessible, quality, comprehensive services to children and families at risk.

Hospitals, medical schools, state and local health departments, physicians in private practice, and community health centers assumed lead roles in providing comprehensive health care to infants and children from poor families in the programs presented here. Most of the systems developed, however, include partnerships with other public and private organizations: with schools, community action agencies, or welfare and job training agencies. Eventually, in some cases, separate financing and administrative vehicles were created that unified the mission and the providers around the needs of the target group.

## Emphasize quality in managed care programs

Many states are now pursuing the development of managed care systems for populations of Medicaid enrollees. They see possibilities to control Medicaid expenditures and improve accountability. Medicaid enrollees may also experience better continuity of care and improved access. Most of these efforts, though, have focused on provider recruitment, client enrollment, gatekeeping, and reimbursement—not on establishing quality of care standards that meet the comprehensive needs of low-income families.

Managed care arrangements have the potential for enhancing health care for Medicaid-eligible infants and children. Their management information systems can generate utilization and cost data that permit managers to intervene with clinicians if patterns are less than optimal.[43] Appropriate incentives to provide support and specialty services together with continuous eligibility and a strong quality assurance program could make managed care an attractive option for families living in poverty.

The Bronx Health Plan combines the best features of managed care with the services and standards of community health centers, and it includes the ambulatory care practice network and residency programs of the Department of Family Medicine at Montefiore Medical Center, which has been oriented to community needs for some time.[44] The tendency to limit the number of referrals to specialists that has been observed in other Medicaid managed care plans has so far not been observed in The Bronx Health Plan. Rather, physicians find referral to specialists easier to manage than usual because the specialists receive fees higher than regular Medicaid rates for seeing Plan members. The Plan discourages visits to emergency rooms for nonemergencies, but the large volume of patients and billing difficulties in New York City make it impractical to deny payment to emergency room providers because they have failed to obtain prior approval.

In Minnesota, the state offered several incentives to encourage county participation in its Medicaid managed care demonstration project. For example, the legislature supported project development by allocating funds for research and development. During implementation, the state picked up the local share of administrative costs associated with the project. The state also reduced the proportion of service costs paid by localities from 10 percent to 5 percent.[45] The demonstration project found that educating clients at the time of Medicaid enrollment about the benefits of managed care and differences among plans is effective in reducing the rates of disenrollment. Consumer education is also necessary to alter patterns of health care–seeking behaviors and expectations such as reliance on emergency room visits for acute care.

Capitated managed care also poses some distinct disadvantages for high-risk infants and children. Studies of demonstration projects and state pilot efforts indicate that relatively high percentages of infants and children do not receive immunizations or preventive screening examinations as indicated. They may also be referred less to specialists when the primary care provider has a financial incentive not to refer. Discontinuities in Medicaid enrollment status disrupt continuity of care in ways that are very distressing for the provider as well as the family. Children with special health needs or complex family and social problems may not receive enough outreach, case management, and home-based services. One possible solution for these families, adopted by states with managed care plans, is to exclude high-risk infants and children from managed care plans, and coordinate their service needs with fee-for-service Medicaid.[46]

## Apply lessons from prenatal care to child health care.

Enormous progress has been made at the state and federal levels in facilitating women's access to prenatal care. Expansions of Medicaid eligibility in close to half of all states to 185 percent of poverty, plus presumptive eligibility and reduction of assets tests, added to enhanced benefits, have improved the chances for better birth outcomes for women who seek prenatal care early. Perinatal care coordination for high-risk women has succeeded in linking families to services they would not have received otherwise. Many of the program managers contacted in this project, who have been actively involved in prenatal care advocacy, policy reform, and program planning, feel that the same strategies can be applied or extended to pediatric care.

South Carolina and Mississippi have developed systems for identifying high-risk pregnant women and referring them to risk-appropriate care. Mississippi adapted South Carolina's system to its own circumstances, and programs in the two states share some features. The central thrust of their prenatal programs is to assure risk-appropriate comprehensive care for pregnant women and infants enrolled in Medicaid. Both states have learned a great deal through attempts to make the system work in over half of their health districts and counties.

South Carolina has identified the key strengths and weaknesses of HRCP that might be applicable to a public/private system of health care for children. Strengths include these program elements: risk assessment is available to all women eligible for Medicaid; all high-risk women receive enhanced services from a qualified provider; case management contributes to continuity of care between public and private providers; and infants identified as high-risk receive home visits.

**Expansions of Medicaid eligibility in close to half of all states to 185 percent of poverty, plus presumptive eligibility and reduction of assets tests, added to enhanced benefits, have improved the chances for better birth outcomes for women who seek prenatal care early.**

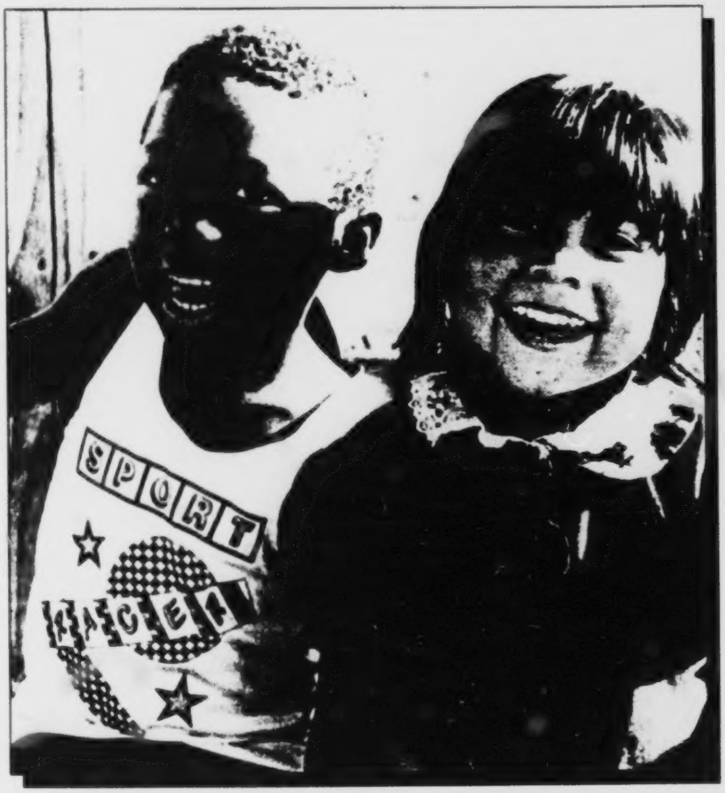
Issues to resolve in adapting the perinatal program to child health care include the following: clarification of responsibilities and procedures for risk screening of infants and children for public and private providers; need for mechanisms to assure that all high-risk infants receive risk-appropriate care; case management standards and procedures for productivity, staffing, treatment, and follow-up; discontinuous enrollment of children one year of age and older in Medicaid; and arrangements for sharing responsibilities for care among public and private sectors.

Both South Carolina and Mississippi rely heavily on their state health districts and local health departments to provide prenatal care, preventive child health care, and support services. South Carolina is seeking to develop statewide networks of public and private providers that will care for low-income infants and children. Efforts are under way in two of the health districts, in which medical school teaching facilities are located. In the remaining 11 districts, shortages of physicians who are willing and qualified are limiting the creation of new networks.

## Expand local system capacity.

One of the most pervasive barriers to the development of comprehensive primary care systems is the lack of private physicians who are willing to provide prenatal care or primary health care to children in poverty. Factors include low reimbursement rates, low salaries, billing complexities, and difficulties in attracting providers to inner-city or rural practice settings. Programs also report difficulty reaching objectives relative to hiring staff who reflect the ethnic and racial composition of their target population, a strategy through which staff can help improve communication and understanding, and serve as role models. Two of the programs—Hawaii and COPC in Dallas—have established activities specifically for physician recruitment.

A local system of comprehensive pediatric care must evolve from suitable practice settings for physicians and be linked to secondary and tertiary care providers. Systems develop in medically underserved areas only with great difficulty when there is an absolute shortage of primary care physicians. Physicians who practice in these settings may let their preferences dictate which families and children to see first, or at all. Federal programs to expand the supply of primary care providers in medically underserved areas include community health centers and the National Health Service Corps. State approaches may include offering incentives for physicians in private practice to relocate; introducing nurse practitioners; or using public health nurses to conduct outreach, risk assessment, screening, and case management. Increasing physician productivity is less feasible if the productivity of local physicians has already reached capacity.



Community-Oriented Primary Care Program, Dallas, Texas

# Conclusions

The programs described in this report have developed some common approaches as health care providers for children in high-risk families. These approaches suggest that the providers have committed themselves to addressing a broad spectrum of factors—beyond the narrowly medical—that are important in health promotion and disease prevention for children born into poverty.

These programs also reflect the areas of convergence and divergence that characterize our thinking about primary health care systems. Broad agreement exists among state MCH service programs about the need to strengthen their leadership role in assuring health care for infants and children from poor families. There also appears to be agreement among state and local health agencies about many basic components of care that should be available to high-risk mothers and infants. Disagreement remains, however, about the context and approach for delivering services at the federal, state, and local levels.

The challenge now is to create stronger federal/state/local partnerships that can assess possibilities for local systems development, identify real gaps, and plan how to implement the needed changes. Flexible funding for community assessments, for planning, for visiting promising projects in other states, and for securing technical assistance, is always in short supply. State MCH programs and private foundations have contributed funding, standards, and technical expertise for program development and replication in many instances. However, communities with an infrastructure of services and educational institutions are in a better position to enlist assistance from private foundations than those that do not. Therefore, the role of state agencies remains critical in terms of overseeing and monitoring the distribution of the health care infrastructure and clients' access to services. Bringing needy populations into strong systems of care becomes easier if essential community-based building blocks are in place.

Leaders in MCH recognize that the fundamental tools for systems development—Medicaid and Title V—require restructuring or replacement before they can effectively address local obstacles to health care for low-income families with young children. National health care reform and universal access may remove some financial barriers and offer more incentives to primary care physicians, but other obstacles will require systems engineering at the state and local levels to target the populations in need, coordinate services, integrate funding streams, prepare risk protocols, and work out referral agreements. The role of local public health departments must be clarified and strengthened, or suitable proxy organizations must be developed to assure low-income families' access to personal health care services.

The programs covered in this report are still evolving, some in ways that may positively influence their local and state systems of pediatric care. Their experiences in grappling with local, state, and federal policies offer good lessons for adaptation in their own states and elsewhere. The development of statewide strategies for comprehensive child health systems should be encouraged. Child advocacy groups, the media, voluntary organizations, health professional associations, hospitals, and churches can all contribute. With a shared belief that national policies should promote equity and emphasize prevention, these groups can work with the public sector to assure quality health care for all children.

> **Broad agreement exists among state MCH service programs about the need to strengthen their leadership role in assuring health care for infants and children from poor families. . . . The development of statewide strategies for comprehensive child health systems should be encouraged.**

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# Glossary

**Aid to Families with Dependent Children (AFDC).** In 1935, the Social Security Act established Aid to Dependent Children, a cash grant program enabling states to assist children who did not receive financial support from their fathers and who were in need. This program was renamed Aid to Families with Dependent Children in 1965. It now provides cash payments for needy children who lack support because at least one parent is deceased, disabled, continually absent from the home, or at the option of the state, unemployed. Since 1990, states have also been required to provide cash payments to needy two-parent families whose principal earner has been unemployed for six out of 12 months.

**Children and Youth (C&Y) Program.** This federal special grants program, legislated through amendments made in 1965 to Title V of the Social Security Act, funded projects for comprehensive health services for children and youth. Originally, C&Y projects were awarded as discretionary grants through the federal Children's Bureau (whose health programs are now within the Maternal and Child Health Bureau). Later, they became a requirement for state Title V programs. After 1981, states were no longer required to have one or more C&Y projects.

**Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program.** This health care program, administered by the states, offers early health screening, diagnosis, treatment, and periodic follow-up services to Medicaid-eligible infants and children. It is mandated by federal law and is funded by states and the federal government.

**Healthy Start** is a presidential demonstration program to reduce infant deaths in 15 urban and rural communities with high rates of infant mortality. With grants administered by the Health Resources and Services Administration, these communities are developing innovative approaches to helping babies get a healthy start in life. Coalitions of local and state governments, the private sector, schools, religious groups, and neighborhood organizations are working to develop effective medical and social services for women and their babies.

**Healthy Tomorrows Partnership for Children** is a collaborative venture between the American Academy of Pediatrics and the Maternal and Child Health Bureau, and it is part of the Maternal and Child Health Improvement Projects grant program authorized under Title V of the Social Security Act. Healthy Tomorrows, administered by the MCH Bureau, supports special projects that demonstrate how states, local agencies, organizations, and communities can work together to improve the health status of mothers and children.

**Maternal and Child Health Services Block Grant.** This federal program, authorized under Title V of the Social Security Act, provides funds to states for health services to pregnant women, infants, children, and adolescents. States determine the services to be provided, which can include prenatal care, well-child clinics, immunizations, dental care, family planning, and a wide range of inpatient and outpatient services for children with special health care needs. Created by the Omnibus Budget Reconciliation Act of 1981, the program consolidated several categorical grant programs.

**Medicaid.** Title XIX of the Social Security Act, passed in 1965, authorized Medicaid as a means-tested entitlement program for medical assistance vendor payments. The program was designed to provide medical assistance to needy families with dependent children and to aged, blind, or disabled individuals whose incomes and resources were insufficient to pay for necessary medical services. At the federal level, the program is administered by the Health Care Financing Administration of the Department of Health and Human Services. In 1987, the federal government gave states the option to raise the income eligibility level of pregnant women and infants to 185 percent of poverty. Effective April 1990, Medicaid eligibility was mandated at 133 percent of poverty for pregnant women, infants, and children up to age six. Since each state designs and administers its own program within broad federal guidelines, there are substantial variations among states in persons covered, services offered, and amount of payment for services.

**Public Law 94-142.** Enacted in 1975, P.L. 94-142, the Education for All Handicapped Children Act, requires states to provide a free, appropriate education for all handicapped children between 3 and 21 years of age (except where services for 3–6-year-olds and 18–21-year-olds are inconsistent with state law). Individual educational plans must be developed jointly and regularly by parents and school staffs, with legally binding procedural safeguards. This legislation has since been renamed the Individuals with Disabilities Education Act (IDEA).

**Public Law 99-457, Part H.** This legislation, enacted in 1986, expanded the Education for All Handicapped Children Act. Part H established a new program to encourage states to establish comprehensive, multidisciplinary systems of early intervention services. In July 1991, Congress gave states the option of an extra two years to develop their systems before being required to serve all eligible children (P.L. 102-52), rewarding those states keeping to the original five-year schedule with additional federal funds. In October 1991, Congress enacted P.L. 102-119, which reauthorized Part H for three years, strengthening its family-empowerment provisions and expanding its potential for serving historically unreached families.

**Special Supplemental Food Program for Women, Infants, and Children (WIC).** This federal program provides cash grants to each state for nutrition services. WIC sites, often located in public health clinics, provide supplemental foods and nutrition education for low-income pregnant and postpartum women, infants, and children through age four who are at nutritional risk. Beneficiaries receive appropriate referrals for health services. Supplemental food may be in the form of either actual food or vouchers valid for purchases of specific food items in retail stores.

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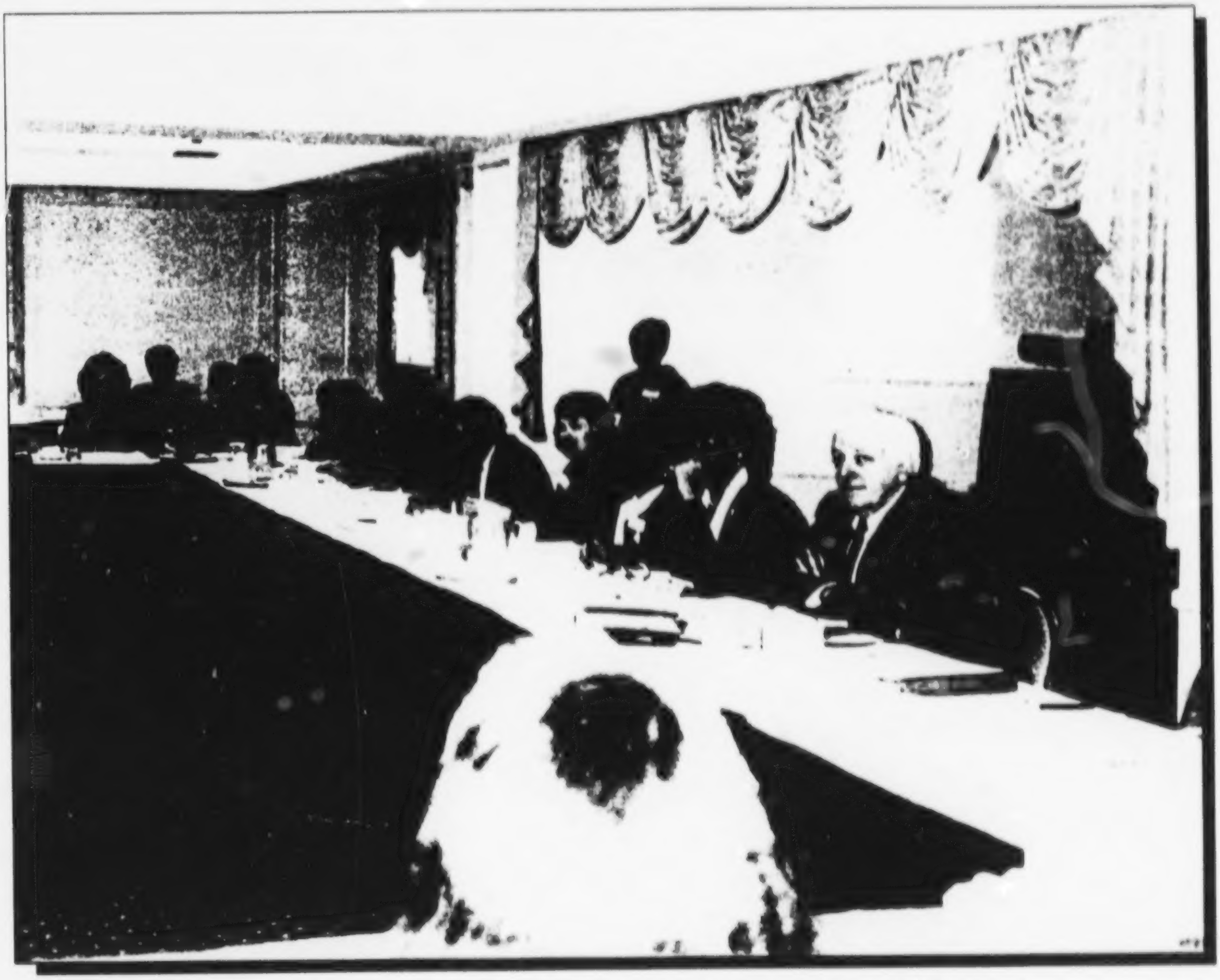

National Center for Children in Poverty Project Seminar on Comprehensive Health Care Strategies for Young Children in Poverty, December 1991, Washington, DC

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# Appendix B—Case Summaries*

## Jackson-Hinds Comprehensive Health Center

by Aaron Shirley

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### Background and Organization

The Jackson-Hinds Comprehensive Health Center is a community-based primary health care program funded by the U.S. Public Health Service. It was established in 1970 as an Office of Economic Opportunity (OEO) model and was transferred to the Department of Health, Education, and Welfare in 1974.

The Center is proud of its accomplishments in meeting the medical and health needs of its target population, as well as the positive relationship it has built over the years with other health care providers and organizations at the state and local levels. The Jackson metropolitan area is the state's largest, comprising three counties. The Center's service area is both urban and rural.

The primary service area is within Hinds County, where 85 percent of the Center's users reside. Of the 37 census tracts that make up the primary service area, 18 are medically underserved. A recent telephone survey found that only six of 21 primary care physicians in the service area accept Medicaid patients; the county has more than 45,000 residents estimated to be eligible for Medicaid. Of the four major hospitals in the county, only the University of Mississippi Medical Center accepts nonemergency indigent patients. County health department clinics provide limited primary care, focusing mostly on specific diseases, prenatal care, and immunization. Thus, the Jackson-Hinds Health Center is the only program in the county meeting the comprehensive health needs of the target community.

Assessment of health care needs in the community has revealed that the needs of the target population cannot be met within the traditional medical environment. Improving the conditions that contribute to premature deaths and morbidity requires aggressive outreach, strong community health education, and access to sensitive primary health care services.

The Center's linkages with other community health and social agencies help patients obtain needed services. For example, Mississippi Baptist Medical Center and the University Medical Center, both in Jackson, deliver Center patient babies. The Center has arranged with the Mississippi health department for on-site certification of eligible pregnant women for the WIC Program and for actual food distribution at the rural satellite clinic. The Center receives reimbursement from the state Medicaid program for social services, nutrition counseling, home visits, and transportation for pregnant women. Meharry Medical College in Nashville, Tennessee, oversees six-week rotation assignments for third- and fourth-year medical students as a part of their community medicine requirements.

The goals and objectives of the Center are related directly to the priorities established through staff collaboration with a broad segment of the community, including active patients, local hospitals, human service agencies, the University of Mississippi Medical Center, and the state board of health. These goals are in keeping with specific objectives established by the Mississippi State Health Plan and with the results of the Center's needs analysis of the target population. Priority services address problems in infancy, early childhood, adolescence, and adulthood. Goals related to health status focus on seven areas—infant mortality, teenage pregnancy, immunization, AIDS, preventive health, life expectancy, and dental health.

**The Center believes that early entry into a system of continuous and risk-appropriate care is essential. Thus, the perinatal program conducts outreach, community health education, and high-risk case management.**

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**In the following case summaries acronyms are used for several programs and federal agencies. For definitions of acronyms that are not spelled out in the case summaries, see the Glossary on page 58.*

## Accessibility

Within its primary service areas, the Center has identified geographic areas and neighborhoods with extremely high-risk populations. Special outreach efforts targeted there include door-to-door canvassing and community health education.

Clinic hours are from 8:30 a.m. to 7:00 p.m. for pediatric patients. When the clinic is closed, staff physicians provide coverage. One local hospital has offered to assist the Center extend its hours until 10:00 p.m. because this would help reduce inappropriate use of the hospital's emergency room.

Patients can contact a pediatric, obstetric, and adult medical provider at all times. An answering service routes after-hours calls to the physician covering for each discipline. The Center has strengthened its relationship with the private medical community by sharing night and weekend calls with a private pediatric group and a private internist.

Jackson-Hinds has an "open door" policy for sick infants and children. Parents requesting appointments for sick children are seen within 24 hours; emergencies are handled immediately. A pediatric provider is on call at all times, including after hours, on weekends, and on holidays. Three staff pediatricians and two contracted private pediatricians respond to night and weekend calls at either Methodist Hospital or St. Dominic's Hospital, and they admit patients who require hospitalization and have third-party coverage. Patients without health insurance are referred to the University of Mississippi Medical Center, a teaching hospital. They bring a complete discharge summary back to the Center.

The Center's active social service component assures that clinic patients have access to needed services. The social workers are familiar with other service agencies in the area, and they frequently function as brokers, helping patients secure appointments, transportation, and Medicaid benefits. A public welfare department Medicaid-eligibility worker assists patients on-site with the application process. To gain greater access to high-risk and potentially high-risk school-age children, the Center has established primary care health clinics in four senior high schools, four junior high schools, and one elementary school in the city of Jackson and rural Hinds County.

## Comprehensiveness

The Center believes that early entry into a system of continuous and risk-appropriate care is essential. Thus, the perinatal program conducts outreach, community health education, and high-risk case management.

At the first prenatal visit, each patient undergoes a special risk assessment that uses the Hollister Maternal Instrument and the state health department's Perinatal High Risk Management Instrument. The latter instrument assesses psychosocial risk factors such as grade of school completed, self-esteem, relationship with family members, and home environment.

If either instrument determines a person to be at high risk, Center staff enroll the patient for special support services under the center's Perinatal High Risk Management (PHRM) Program. The Program offers social services, nutrition counseling, home visits, health education, parenting classes, and transportation for subspecialty care.

Well-baby and well-child care form the backbone of preventive services for infants and children. Infants delivered through the perinatal program have their first well-baby visit at two weeks of age. If the mother has met any Hollister or PHRM criteria prenatally, or if the infant meets any PHRM risk criteria, the Center schedules frequent visits.

## Coordination/Continuity

The Jackson-Hinds Health Center uses a problem-oriented medical record format, along with logs to track and recall patients with special problems. Copies of patient records and flow systems are in the institutional file in the regional office and integrated into essential tracking systems.

Collaborative arrangements with local hospitals assure care coordination for maternity patients. The Center's obstetrician at the Mississippi Methodist Medical Center or one of the four contracted private obstetricians delivers patients with third-party coverage. Patients with no third-party coverage receive Center prenatal care but deliver at the University of Mississippi Medical Center. Prenatal care records (including results of the Hollister Maternal Instrument) accompany these patients, and labor, delivery, and newborn records are returned to Jackson-Hinds on the patient's discharge.

Continuity is also assured for patients requiring hospitalization. Since all Center physicians have admitting privileges at one or more of the three local hospitals, they can follow hospitalized patients. A tracking system is in place for retrieval of hospital records and discharge summaries.

## Accountability/Quality Assurance

A committee composed of the clinical director, pediatric supervisor, director of nursing, and X-ray technician conduct the Center's quality assurance program. The committee reviews charts drawn at random for patients in selected age categories, as well as for those who have received prenatal and postnatal care. The Center is redesigning its quality assurance program to focus on outcomes related to objectives. Proposed areas for review include risk assessment, postpartum follow-up, and delivery of first-trimester prenatal care. Pediatric indicators include immunization, growth and development, and preventive dental care.

Jackson-Hinds is in the process of implementing several innovative strategies to reach its immunization goals for two-year-olds. The Center plans to begin more aggressive outreach and monitoring, using a team to address the problem. It will seek help from private sources to motivate parents to get their children immunized. One plan is to issue food coupons from local supermarkets to parents who bring infants and children to the Center for well-child checkups and immunizations. Also, every infant will be assigned to one social worker in the Perinatal High Risk Management Program; the worker will be responsible for contacting parents and ensuring that they keep appointments for well-child care and immunizations. Evaluation of social worker performance will include the immunization levels of infants assigned to them. A computerized system will identify clinic users who do not have up-to-date immunizations. Two staff members will be assigned to locate patients. Because the target population's high mobility undermines routine health care, the Center has proposed that the outreach worker collaborate with the state human services department to maintain contact with families who have moved. As an incentive, the staff members responsible for tracking will receive a quarterly bonus if 90 percent of the children assigned to them have up-to-date immunizations.

# West Dallas Children and Youth Project

by Stephen Rosser

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The Dallas Children and Youth (C&Y) Project began in 1967 as a local demonstration of health care delivery to underserved young people. It was funded by a Title V grant from the U.S. Department of Health, Education, and Welfare to the Department of Pediatrics, University of Texas Southwestern Medical School, which served as the parent organization until 1989.

The Project was based initially in the outpatient department at Children's Medical Center on the medical school campus. Services were directed to any low-income child or adolescent entering the system. The care was subspecialty-oriented, poorly coordinated, and relatively inaccessible because of an ineffective public transportation system. In 1969, the target population was redefined to focus on a small geographic area, West Dallas, and a decision was made to initiate neighborhood-based clinic services. Two pediatric health care teams were established in the West Dallas community—one in a public housing project, and the other utilizing the church facilities of a mission. In 1970, in a similar approach initiated for West Dallas adolescents, a physician/clerk team began working on the Pinkston High School campus. These decentralized sites improved accessibility, population acceptance, and community identification, all of which had been lacking at the central location. For the permanent clinic sites, which would permit early identification of health care problems and more comprehensive treatment intervention, the Dallas Independent School District and the University of Texas Health Science Center at Dallas agreed to establish two clinics for infants and school-age children on elementary school campuses. This was in 1972, long before the "school-based clinic" movement was conceived or

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recognized. The West Dallas Youth Clinic at Pinkston High School is the oldest continuous-service school-based clinic for adolescents in the country. The two elementary school–based clinics are the only preadolescent clinics in the country that participate in a continuum of care from birth to young adulthood.

In 1989, Dallas launched its Community Oriented Primary Care Program (COPC) under the auspices of the Dallas County hospital district. The C&Y Project became the first clinical service component of COPC. The C&Y Project utilizes a health team concept, adopted in 1969 and modified as time, experience, and financial ability have dictated. Members of an interdisciplinary health team are responsible for patient care in their respective areas. The health care team generally consists of a board-eligible or board-certified physician, one or two midlevel practitioners, a social worker, a case aide, a medical assistant, and a clerical support person. Many of the team members are bilingual. The physician leads the team and is ultimately responsible for patient care decisions. The team aims to provide total coordinated patient care without discipline fragmentation; the health professionals are considered a "part of the whole" and not separate entities.

In addition to maintaining a full-time clinic staff, the Project has well-established linkages with Parkland Memorial Hospital, Children's Medical Center, and other health care and community service organizations. These linkages and the clinic staff combine to provide emergency, hospital, and subspecialty care for all C&Y Project patients.

## Accessibility

The Project provides services at the three school-based clinics five days a week from 8 a.m. to 5 p.m. It offers limited services two evenings per week. Weekend services were available in the past, but utilization was low, and most requested services could have been delayed until Monday morning. A 24-hour on-call system is now in place, assuring patients' access to a pediatrician at any time. Although the schools close for the summer, the clinics remain open.

Planned visits, such as for health maintenance exams and chronic health care, require appointments. Same-day appointments and walk-ins account for most of the acute care visits. Depending upon the degree of the medical urgency and clinic load, waiting time for care of acute problems can be between 30 minutes and two hours. The Project has a four-week waiting period for new registrants to make their initial visit; regularly scheduled health maintenance appointments for established patients require about two weeks' lead time. The West Dallas Youth Clinic allocates time in its schedule for walk-ins and call-ins in order to encourage early intervention for health problems of sudden onset, and to minimize use of hospital emergency rooms after clinic hours. Should a patient require a subspecialty referral, the clinic staff makes the appointment. If transportation or finances appear to be a potential barrier, the Project makes the arrangements.

A long-standing community relationship and daily interaction with health and social service agencies facilitate client recruitment. Over 80 percent of all people in West Dallas up to age 18 are registered with the C&Y Project. The high penetration rate is attributed to several factors. First, having served the community since 1969, the program is known and receives referrals through word of mouth; many former patients now bring their children. Second, location at three schools in West Dallas makes the services highly visible and accessible, enhancing cooperation with the Dallas Independent School District. Third, the C&Y Project has built an extensive network of referral linkages with over 60 agencies. C&Y staff also provide training and education for schools and community agencies.

## Comprehensiveness

The only primary care services not provided in the clinic are subspecialty care, radiology, and selected laboratory procedures. The West Dallas Youth Clinic offers the following services:

- **Preventive services.** Health maintenance contributes to the Project goals of preventing health problems and complications of health problems through early detection. The Project's health maintenance services follow the recommendations of the American Academy of Pediatrics and the procedures developed for EPSDT. When the nurse practitioner identifies a patient with a health problem, as a part of the age-related health maintenance service, the clinic physician promptly examines the patient, thereby avoiding the need for reappointment or referral. A computerized report identifies patients who miss regularly scheduled health maintenance visits, and the health team social workers and nurse practitioners contact these patients by telephone or home visit to reschedule them. If transportation is a cause for the missed appointment, the Project makes arrangements to assist the patient. A patient or parent who refuses to cooperate with the health maintenance services or with an established treatment plan is placed on an agenda for health care team staffing, where a plan to improve cooperation is developed.

- **Acute and chronic care.** The Project emphasizes high quality management of acute illnesses or injuries and chronic health problems with the goal of preventing complications and reducing the need for hospitalization.
- **Adolescent reproductive services.** Reproductive services for adolescents, both male and female, make a major contribution toward the Project's goals: to prevent infant mortality; to prevent unwanted pregnancies, child neglect, and child abuse; to prevent complications of pregnancy, septicemia, and secondary syphilis; and to contain health care costs (hospital utilization). The Project offers the following reproductive services: sexual development and sex education counseling; a complete range of choices of contraceptives (except IUDs) for sexually active adolescents; pregnancy testing; problem pregnancy counseling; and general disease testing and treatment.
- **Prenatal services.** Adolescents who come to the clinic receive routine prenatal care as soon as a pregnancy is confirmed. Specific services include an initial obstetrics screen; classes on fetal growth, delivery, and basic child care; general prenatal follow-up care; and care provided by an obstetrician for complicated pregnancies. An obstetrician is on-site one-half day a week, and a nurse practitioner trained in obstetrics and gynecology is assigned to the clinic two days per week. Except for those cases in which the patient is experiencing a complication or has a history of prenatal complications, the nurse practitioner provides prenatal care. This ensures continuity of the pregnant adolescent's health care with previous clinic services received and treats the pregnancy as another health issue.
- **Social services.** The clinic social workers evaluate psychological, social, and environmental factors that are causing family stress, problems, crises, or disability, and that may adversely affect the patient's health status. They do this in interviews with every new family coming to the clinic to register or for a health maintenance visit, and with those referred by other agencies or other disciplines within the clinic.
- **Laboratory services.** The clinic provides the following laboratory services on-site: microscopic urinalysis; urine pregnancy test; urine dip stick; Gram stain; urine specific gravity; fungal KOH prep; hematocrit; testuria; stool guaiac; wet prep for trichomonas; stool wet prep for neutropolis; and throat culture. A local clinical reference laboratory provides other laboratory services, with results available usually within 24–48 hours.

## Coordination/Continuity

The social workers play a pivotal role in coordinating the various services needed by families. They evaluate such family characteristics as physical health; mental health; employment; financial resources; housing; educational needs or deficits; and family "integrity," such as spousal separation, divorce, or runaways. A social worker, together with the family and other team members, develops an intervention plan to either eliminate problems or minimize their effects. Implementation of the plan requires the social worker to act as case manager, counselor, patient advocate, and outreach worker. Children with chronic health problems require a treatment plan and contributions from two or more disciplines. The health team leader approves the treatment plan and assigns a case manager to each patient with a chronic health problem. Health team members pay particular attention to family dynamics, the family's supporting network, transportation problems, and the special problems posed by terminal illness. Linkages with community agencies that make valuable contributions to the care of patients with chronic health problems have been a vital asset to the clinic.

**A long-standing community relationship and daily interaction with health and social service agencies facilitate client recruitment. Over 80 percent of all people in West Dallas up to age 18 are registered with the C&Y Project.**

## Accountability/Quality Assurance

The Project's in-house management information system allows selected health outcome indicators to be tracked for each age group in the community and for Project users. When adverse trends are noted, staff efforts are redirected toward priority areas.

The following information highlights major indicators that reflect Project accomplishments:

- **Infant mortality.** When the Project moved into the community in 1969, the West Dallas infant mortality rate was the highest in Dallas County, exceeding 30 deaths per 1,000 live births. The 1985–1989 five-year average for West Dallas was 12.02 per 1,000, compared with the Dallas County average of 10.06 per 1,000. In two of the five years, the West Dallas rate was below that of the county.
- **Adolescent pregnancy.** In the Project area, the birthrate for adolescents remains two times the national average today, and the second highest of any community in Dallas County. However, deliveries among 17–18-year olds have dropped from 235 per 1,000 females to 185 per 1,000. West Dallas pregnant adolescents are more than two times as likely to receive early prenatal care as their other Dallas County counterparts.
- **Hospitalization.** Inpatient data reflect severity of illness and complication of disease. When admissions for deliveries are discounted, West Dallas residents who use C&Y health centers are hospitalized at a rate approximately one-fourth that of West Dallas children and adolescents who do not use Project services. The Dallas County hospital district reports that these reduced hospitalizations save an amount approximately equal to the annual grant from Title V.
- **Cost-effectiveness.** Information from fiscal year 1991 shows average annual costs of $143 per user and $51 per visit. Considering the extent of services, comprehensiveness of care, and demonstrated cost benefit, the Project has been cost-effective in delivering health care to the medically underserved.

# Family Care Center

by Doane Fischer

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## Background and Organization

The Lexington-Fayette Urban County Government established the Family Care Center in 1989 to provide comprehensive, coordinated services, in a single setting, to low-income young families and their preschool children. The Center integrates three on-site programs—developmental child care, including preschool and kindergarten programs for children; children's health services; and a parent education center that includes general equivalency diploma (GED) and high school classes. The health clinic provides an array of primary health care services to more than 750 enrolled children and children in the community. Case management, home visits, and transportation are available, and Center staff strive to coordinate service efforts to meet the needs of families and children and move them toward economic self-sufficiency.

Infants and the preschool children of single mothers are the groups that receive the highest priority in the health clinic. Other priority clients are infants and preschool children in families with incomes at or below 185 percent of the federal poverty level, children at risk for poor health or social outcomes, and siblings of enrolled children (up to age 12).

The Family Care Center evolved out of the long-standing relationship between the pediatrics department at the University of Kentucky and the county's Juvenile Detention Center and Day Care Program. Recognizing the potential benefits of an integrated approach to the needs of young children and families, the commissioner of social services and Doane Fischer, M.D. (now the Center's director), brought their concept to the mayor and city council. The concept was approved, and three task forces with wide representation were established to plan a program of health services, social services, and adult education. The city issued bonds, and a $3 million, 48,000-square-foot facility, specifically designed for multiple functions, was built. With the assistance of the departments of health and social services, the Center obtained a waiver making it a federally qualified health center for funding purposes.

The Family Care Center is located on a campus with other social service programs, including a juvenile detention facility, a day treatment facility for troubled adolescents, an emergency shelter for children, an adult group home, and a traffic program for schoolchildren. It operates under the auspices of a wide variety of state and local sponsors:

- **Lexington-Fayette Urban County Government.** The mayor, city council, and commissioner of social services raised funds to construct the Center, to conduct the initial program planning, and to provide salaries.
- **The University of Kentucky.** The president, chancellor of the medical school, and deans of six colleges were involved in early planning. The departments of medicine, nursing, and dentistry provide faculty, residents, and graduate students. The University of Kentucky pays fringe benefits and malpractice insurance, and allows the Center to benefit from discount purchasing of capital equipment and supplies. In addition, the university provides backup services for the health clinic.
- **Bluegrass East Comprehensive Care Program.** This program provides mental health staff.
- **Cardinal Hill Rehabilitation Hospital.** The hospital provides occupational, speech, and physical therapy.
- **Lexington-Fayette County Health Department.** The department provides staff for the WIC program; supplies free vaccines; handles pharmaceuticals; and provides home health backup and health education.
- **Commonwealth of Kentucky.** The governor and the cabinet secretary for human resources have played active roles on behalf of the Center. Public agencies contribute direct or indirect services—including the departments of social services, health services, Medicaid, and mental health, as well as the Commission for Handicapped Children.
- **Academy of Pediatrics.** The Academy administers the Healthy Tomorrows grant, which funds purchase of services for non-Medicaid children, social services, transportation, and other services.

## Accessibility

All children are seen by appointment, and sick children can be seen immediately through phone-in appointments. Pediatric nurse practitioners or physicians are available from 9 a.m. to 4 p.m. Patients needing care at other times can contact a resident who is on beeper call. If the resident determines that a patient needs to be seen when the clinic is closed, the resident refers the family to the University of Kentucky Medical Center.

Case managers provide services to families using the Center. The clinic social worker, public health nurses, and students in the College of Nursing's home health training program provide outreach. With funding from a federal Healthy Tomorrows grant, a van provides transportation for families when problems arise.

The greatest source of new referrals to the Center is the University of Kentucky Newborn Nursery, where most of the low-income women in the county have their babies. The Center also recruits clients through on-site child and adult programs. The Center advertises on TV and radio, and makes itself known to potential sources of referral, such as school counselors and social service agencies. Staff members also visit public housing.

**The Family Care Center is unique in its comprehensive, multidisciplinary approach to services. The location of day care, health care, social services, adult education, and job training at a single site provides many opportunities for integrated programming.**

## Comprehensiveness

The Family Care Center is unique in its comprehensive, multidisciplinary approach to services. The location of day care, health care, social services, adult education, and job training at a single site provides many opportunities for integrated programming.

Health services include medical, dental, nursing, psychological, speech therapy, pharmacy, and X-ray services. Laboratory services available at the Center include urinalysis, screening cultures, and other office procedures. Home health care, parent education, and transportation are also available. The Center serves as a site for the department's regional pediatric clinic for chronically ill children, its branch clinic of the Young Parents Program, its Vaccine Program, and WIC.

The Center provides transportation to the University of Kentucky Hospital for children requiring certain laboratory tests, X rays, electrocardiogram, and speech and hearing testing. The Center also makes referrals to the Handicapped Children's

Clinic. The Family Care Center serves children with some developmental disabilities and refers children with significant sensory impairments to more specialized sites.

### Continuity/Coordination

Seven resident physicians provide health services to children; five are triple board residents (in pediatrics, psychiatry, and pediatric psychiatry) who spend three years at the Center. Two nurse practitioners cover the clinic 70 percent of the time, thereby facilitating continuity, and the medical director spends most days there from noon to 5 p.m. The medical director's appointment at the university hospital provides the linkage between hospital and health clinic when the latter refers children for emergency services, hospitalization, and subspecialty care. Staff members can track and follow up on patients by reviewing charts, maintaining an appointment follow-up card file, and conducting home visits.

### Accountability/Quality Assurance

The Healthy Tomorrows staff reviews the health program annually. In addition, Kentucky Medicaid KenPac (the state's managed care program) conducts a periodic audit of the clinic and other primary care centers and KenPac providers. Assessment indicators include pharmaceutical utilization rates, laboratory utilization rates, physician referral rates, unnecessary emergency room utilization, and costs. The Center has proposed but not finalized plans for an internal audit focusing on preventive, acute, and chronic care for children. The evaluation of preventive care, to be conducted by the University of Kentucky's Survey Research Center, will be based on the standards of the American Academy of Pediatrics. Assessment of the delivery of acute care will be based on outcomes for selected conditions—otitis media, strep throat, upper respiratory infections, and gastroenteritis. Assessment of chronic care will focus on the acquisition of needed services and timeliness of follow-up.

## Brennan's Health Connection

by William P. Quinn

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### Background and Organization

In January 1991, an enhanced school-based clinic called the Brennan's Health Connection was established at a New Haven elementary school. The five-year project is funded, in part, by a Healthy Tomorrows grant from the Maternal and Child Health Bureau, which funds the two agencies contracted to the New Haven health department for the clinic. Matching funds, primarily for support services, came from the New Haven health department and each of the two agencies under contract.

Project goals are as follows:

- To enhance the long-term capacity of school health services to serve as access points and sources of continuity for appropriate health and mental health care for children
- To facilitate a coordinated approach by the board of education and the city health department to meet the health, mental health, and health education needs of school children
- To develop a partnership between school health personnel and a health care provider in a model school-linked clinic program
- To develop a partnership between school health personnel and a health care provider to provide comprehensive, preventive health, and mental health care for preschoolers and elementary school children in an isolated, underserved area of the city

The elementary school has a full-time core staff consisting of a pediatric nurse practitioner and a school nurse. This team has direct access to two external care providers: a federally funded community health center, the Hill Health Center; and a center for sociological/psychological evaluation affiliated with Yale University.

All components of this program are committed to providing medical care to all students enrolled in the school. The school-based clinic serves children from kindergarten to grade six, Head Start children (approximately 60 children ages three to five), and siblings of these school children, from birth to age five.

To meet the needs of young children in the most disadvantaged areas of New Haven, health services must be both accessible and comprehensive. Because of social and environmental factors such as geographic or psychological isolation, family disorganization, and substance abuse, the needs of these groups have outstripped the capacity of the existing service delivery system to provide genuinely accessible and comprehensive care. The school nurse is accessible, and the primary health centers are comprehensive. But the two systems operate on parallel tracks, with considerable costs in efficiency and effectiveness.

The Katherine Brennan Elementary School was chosen because it is located in an isolated and severely underserved area of New Haven. The infant mortality and low-birthweight rates for this census tract are high. All 400 elementary school students, who are predominantly black, live in three public housing projects operated by the New Haven Housing Authority. Thirty-nine percent of the 512 households in the neighborhood are below the poverty level and receive AFDC. Many of the households have infants and small children. The neighborhood is geographically cut off from the rest of New Haven by West Rock on one side and a fence erected by the town of Hamden on the other. The need for health services was identified by neighborhood residents and providers as the highest priority among the many services that the area lacks.

## Accessibility

The placement of this school-based clinic ensures access to comprehensive, skilled, and personalized health and mental health care. Parents of young children find the familiar neighborhood site convenient for consultations, immunizations, and nonemergency acute care from a consistent skilled practitioner. All services, including those offered by ancillary staff, are free. If children are subsequently enrolled with an ongoing health care provider, such as a community-based health care clinic, fees are on a sliding scale, and Medicaid is accepted.

Each child enrolled in the school-based clinic has a signed parental permission form on file and an ongoing medical record. In the third year of operation, approximately 80–90 percent of all elementary school students were enrolled in the clinic, in addition to some younger siblings and infants and toddlers in the neighborhood. Children enrolled in the clinic are asked about their regular source of ongoing health care, and if they have none, they are encouraged to enroll in the community health center, as well.

**The need for health services was identified by neighborhood residents and providers as the highest priority among the many services that the area lacks.**

## Comprehensiveness

The school-based clinic staff, a full-time pediatric nurse practitioner and part-time school nurse, are joined by a pediatrician consultant and a social work consultant from Yale University for several hours each week, and the consultants are available by phone at any other time to provide assistance with either direct services or referrals for nonroutine medical care. A core group of services includes preventive health and acute pediatric care, with ongoing management of chronic illnesses. Developmental assessments, immunizations, vision and hearing tests, and lead screening are all performed on-site.

As part of a matching contribution, New Haven health department staff are available for presentations, consultations, and follow-ups with teachers, students, and parents concerning nutrition, hypertension, diabetes, dental care, hearing problems, and AIDS. A maternal and child health program funded by the city's health department supports an outreach worker in the neighborhood who assists high-risk women of childbearing age to gain access to the health care system. This program enrolls the women with a health care provider during the early stages of pregnancy, follows them through their pregnancy, and eventually enrolls their baby with an ongoing health care provider. The outreach worker may also refer young children in the neighborhood to the school-based clinic for routine health assessments, physical examinations, and lead testing, thus increasing the potential for joining a stable, ongoing system of health care within the community.

Mental health concerns are handled by the nurse practitioner and the consultant social worker, in concert with teachers, Emotional distress and "tummyaches" related to family problems are frequent complaints among the elementary school children, who increasingly come to the nurse practitioner to seek reassurance or guidance.

Pediatric care, including prescription medication provided by the nurse practitioner, may reduce absenteeism. For example, she commonly treats ear infections, strep throat, ringworm, other skin ailments, and conjunctivitis. She monitors approximately 40 children with asthma, providing nebulizer treatments for some in school. Tests conducted at the school include throat cultures, fingerstick lead screening, and urinalysis. On-site physical examinations and immunizations for Head Start enrollees and children entering the Katherine Brennan School eliminate a waiting period and the need for missed days of school. Home visits are arranged as needed, through the school social worker or neighborhood outreach worker.

## Coordination/Continuity

The clinic functions more as an extension and supplement for primary health care providers than as a separate provider. Daily contact occurs between the pediatric nurse practitioner, the school nurse, the pediatric consultant, and the social work consultant. Weekly meetings are held, and quarterly progress reports are submitted, in addition to an annual report. The nurse practitioner consults with a pediatrician at the community health center or with the child's private physician each time medical follow-up or additional information is required. Occasionally, she refers children to specialists directly. A report goes to the child's primary physician for each illness treated, and for updating the preventive services' record.

## Accountability

Computerized documentation about the population served, the services provided, and the tracking of referrals and follow-ups provides an evaluation of clinic outcomes. The database program has the capability of generating a variety of reports, including broad demographic, referral, and follow-up information, as well as reports on individual clients served by the clinic. The program is interested in documenting the impact of the health care on rates of absenteeism.

## Strengths and Weaknesses

In a formal site visit by the grantee agency, the project received high marks in all areas except dental care. Although gross screenings and cleanings are provided by a dental hygienist under contract to the New Haven schools, there is a demonstrated need for a dentist to perform routine fillings and fluoride treatment. In addition, a dentist would greatly assist in referring children for ongoing dental care within the community.

**The school-based clinic is a good mechanism for introducing underserved children to quality health care in a familiar setting.**

The strengths of the program are many: a professional, well-trained, caring full-time core staff; a network of contracted health care providers in the community; the active support of the lead agency, the New Haven health department; the enthusiastic participation of the school principal; and the increased involvement of parents. The nurse practitioner has been increasingly accepted in the community, and is now seeing a much larger number of infants and toddlers, whose mothers prefer to bring them to the school if they are not sure whether a physician should check them.

Weaknesses in the school-based clinic project include a lack of transportation to get the children from the school to a care provider in the community and back again, and a lack of dental care. While the transportation issue may not be resolved in the near future, efforts are still being made to fund a part-time, on-site dentist and upgrade the small dental clinic located at the clinic.

Every child deserves health care, irrespective of where he or she lives or what the family's income level is. The school-based clinic is a good mechanism for introducing underserved children to quality health care in a familiar setting. The clinic also brokers community resources that help families obtain ongoing medical care. This project is an opportunity for the school and health care systems to form a partnership—leading to "Healthy Tomorrows" for all children.

# The Bronx Health Plan

by Maura Bluestone

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## Background and Organization

The Bronx Health Plan (TBHP) began in the early 1980s with a planning initiative designed to stabilize funding streams for the community health centers affiliated with Montefiore Medical Center. The 1984 New York Medicaid Reform Act allowed prepaid health services plans for Medicaid recipients to become licensed, and in late 1986, the Plan was licensed to serve the entire borough of the Bronx.

Today, a network of nine primary care practices, more than 150 medical specialists, and five voluntary hospitals participate in the prepaid managed care plan, which offers three health care coverage programs. The largest is the Medicaid plan, with close to 14,000 enrollees, including at least 4,000 infants and children under age six. TBHP's UniCare and Child Health Plus programs, New York State's subsidized prepaid plans for low-income uninsured families and individuals, are the next-largest groups, with over 3,000 enrollees. The Plan's board of directors includes the directors of the participating community health centers, most of which are also federally qualified section 330 grantees. The independent, not-for-profit corporation's staff of over 40 manages marketing, enrollment, billing, payment claims, contracting, quality assurance, and utilization management. Enrollees typically represent 10–15 percent of each participating health center's regular users.

The Plan assumes full financial risk for enrollees. (The Plan obtains individual stop-loss coverage from the state for its Medicaid enrollees, and aggregate hospital reinsurance and individual stop-loss coverage for professional services from Empire Blue Cross and Blue Shield for its UniCare Program enrollees.) Specialists receive payment on a fee-for-service basis at rates equivalent to those of other insurance plans; hospitals receive per diem payments for inpatient care, and per visit payments for emergency services. Health centers receive a monthly fee for each enrollee assigned to them, whether or not the individual ever seeks services during the period of enrollment. They also receive a share in the annual Plan surplus. New York State Medicaid pays the Plan monthly per capita premiums based on actuarial analysis of Medicaid and TBHP program experience. These premiums cannot exceed 95 percent of the expected average expenditure.

Although the Plan loses approximately 5 percent of its Medicaid enrollment each month to either voluntary or involuntary disenrollment, a study done several years ago that followed a cohort of enrollees found that 50 percent were still enrolled one year later.

## Accessibility

Enrollment in The Bronx Health Plan is voluntary. Eligibility for the two largest programs (TBHP's Medicaid Program and UniCare) is limited to families and individuals residing in the Bronx with incomes less than 200 percent of the federal poverty level who do not qualify for Medicaid, and to recipients of AFDC or Home Relief, who automatically qualify for Medicaid. Enrollees learn about the Plan in the participating health centers; in the welfare offices; through direct mail; or at other community-based programs, such as Head Start.

Participants must select one of the nine primary health care centers and agree to use it and the rest of TBHP's provider network exclusively for all the services they require. If the enrollee lives over seven blocks from the health center or a specialist to whom she or he has been referred, the Plan reimburses the cost of subway or bus fare, or occasionally taxi fare. UniCare Program enrollees pay $5 in co-payment for each health center visit and each prescription, in addition to a modest monthly premium payment. The health centers offer 24-hour telephone coverage, some evening and Saturday hours, and translation services for common languages other than English. The Plan greatly enhances enrollees' access to specialty care because nonurgent appointments with participating specialists can take place within two or three weeks. Each month, about 2.5 percent of Plan members choose to drop out, generally because they do not like to be restricted to one primary care provider.

**The Plan greatly enhances enrollees' access to specialty care because nonurgent appointments with participating specialists can take place within two or three weeks.**

## Comprehensiveness

Enrollees receive a full range of preventive and medical services, including specialty care. The only dental care included is screening and referral. Social support and case coordination services are not generally included, except those the primary care provider or the Plan considers necessary to manage a medical condition appropriately. For example, the Plan found housing for a mother and her new baby when the hospital delayed discharge because the woman was homeless and the shelter did not allow newborns. Unlimited substance abuse treatment is available to Plan enrollees, but in practice, capacity may be limited. A full range of maternity care services is available. Home visits to pregnant women or infants occur when there is an authorized medical or "social" need. Social work services are available at the health centers. Physicians, nurse practitioners, and physician's assistants provide clinical services. The medical staff of some health centers include primary care residents affiliated with the teaching hospitals; they see patients under supervision of a faculty preceptor.

## Coordination/Continuity

Primary care providers at the health centers manage medical services for patients who seek care. They refer patients to TBHP specialists by calling directly or by making sure that an appointment date has been set before the patient leaves the health center. A patient may be hospitalized directly from the emergency room without the knowledge of the primary care provider, but TBHP staff check with participating hospitals daily to learn whether any enrollees have been admitted. Hospitals are advised to refer Plan members to their TBHP health centers on discharge.

The Plan has a contractual obligation that stipulates that a specialist must report in writing to the primary care physician to receive payment. In practice, telephone reports suffice because verifying the written documentation is impossible to accomplish in a timely period. The Plan monitors this selectively, and reserves the right to enforce the requirement when problems arise.

The biggest obstacle to continuity of care in prepaid health plans for Medicaid recipients is disqualification from Medicaid for administrative or financial eligibility reasons. The Bronx Health Plan tries to mitigate this reality in several ways. Close working relationships with the welfare offices alert the Plan to impending case closures for enrollees who may have failed to keep an appointment or to send requested information on time.

Each enrollee is assigned to or selects one primary care physician, who takes responsibility for managing all the patient's medical needs, including referral to specialty care and, if the physician has admitting privileges, hospitalization. The health centers customarily follow up on missed appointments, on the basis of their judgment about the urgency of contact and standard protocols.

## Quality Assurance

Each year, selected conditions are chosen for review or special studies. Utilization reviews have usually focused on the emergency room and on hospitalization, and in general the Plan demonstrates lower rates than are found in comparable Medicaid populations, except for teenage girls. The Plan has done chart reviews of selected conditions, such as otitis media, with participating health centers. In these cases, a sample of the entire health center user population is reviewed, not just Plan enrollees.

Recent New York State legislation mandates that 50 percent of all Medicaid recipients be enrolled in managed care plans within five years. For this reason, many providers have begun to examine The Bronx Health Plan model. The legislation does not define managed care, however, and there is a concern that plans with under 10,000 members may not be efficient.

# Community Oriented Primary Care: A Program of Parkland Memorial Hospital

by David R. Smith

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## Background and Organization

Parkland Hospital, an 852-bed institution, is the primary operating entity of the Dallas County hospital district and the primary teaching facility for the University of Texas Southwestern Medical Center. Parkland serves approximately 65 percent of the county's 350,000 poverty-level residents.

In 1986, because of overcrowding in the hospital's outpatient services, Commissioners Court of Dallas County asked Parkland Memorial Hospital's board of managers to determine the need for a decentralized system of care. The increasing demand for ambulatory care in the hospital coincided with changes in the health care needs of Dallas residents. After conducting a community needs assessment, the board informed the court of the need for comprehensive community-based health centers in eight locations. The court provided funding for implementing the Community Oriented Primary Care Program (COPC), starting with the construction of a new health center in southern Dallas. In addition, this court action supported the development of three enhancement contracts with existing health centers.

The Texas legislature has indicated that responsibility for indigent health care rests with the counties through the creation of hospital districts. Dallas County covers 880 square miles and has a growing minority population of over 1.8 million. It encompasses the city of Dallas and all or part of 18 suburban municipalities. Texas has a restrictive Medicaid program; until 1992, only 20 percent of those who met federal poverty guidelines were eligible for Medicaid.

As a component of the Dallas County hospital district, COPC is governed by the board of managers of the district. The Program is integrally related to Parkland Memorial Hospital, and relies on Parkland for a variety of services, including personnel, security, purchasing, business accounts, and the provision of inpatient capacity. COPC's mission is to establish a community-based system of care designed to improve the health of medically underserved individuals through easily accessible primary care, health maintenance, and medical intervention programs. The COPC concept promotes decentralization of care to counteract the process of involution that has moved health care facilities and their providers away from the communities at greatest risk and toward centralized medical campuses and their medical centers.

> **The COPC concept promotes decentralization of care to counteract the process of involution that has moved health care facilities and their providers away from the communities at greatest risk and toward centralized medical campuses and their medical centers.**

Community health centers now operated by Parkland's COPC include the Children and Youth Project, the Oak Cliff Clinic, and the East Dallas Health Coalition. Their advisory boards serve the Program both as volunteers and in the area of advocacy. The East Dallas board functions as a small foundation and provides an additional source of revenue to the health center. The new facility in southern Dallas has obtained a Vista volunteer grant to establish an additional advisory board.

## Locating Services

Some of the health care needs identified in the original COPC plan required a rapid response in both the East and the West Dallas standard statistical communities. Through negotiations with existing health centers, COPC incorporated two programs in these communities in 1989: a long-standing Children and Youth Project in West Dallas (described in a separate case summary in this report) that had been associated with the University of Texas Southwestern Medical Center at Dallas, and the East Dallas Health Coalition Health Center. With the successful integration of the Children and Youth Project, COPC took over operational responsibility for the Pediatric Primary Care Clinic and the Young Adult Clinic within Parkland Hospital. In January 1991, a freestanding health center was transferred into the Program, supported through several private and public funding sources. This addition enabled COPC to reach out into the southern Dallas area, where one neighborhood area had been designated in 1986 as at greatest risk.

The integration of these existing facilities has enabled COPC to deliver effective community-based primary care in Dallas County prior to the completion of a planned new COPC health center in southern Dallas. These health services are coordinated with Parkland and designed to provide continuity of care to the neighborhoods through a 24-hour on-call service for both the pediatric and the adult populations. The Program has established evening hours and Saturday and Sunday hours at the central facility. Physicians can follow their patients through hospital stays. During calendar year 1990, Program staff treated over 38,000 patients during 100,000 medical visits.

## Comprehensiveness

Within COPC, health centers provide integrated care on a "one-stop shopping" basis, diminishing transportation barriers. Related services, such as laboratory, pharmacy, radiology, immunization, and health education services, are co-located at one site. COPC's medical approach blends traditional primary care medicine with health education and public health services. The Program combines obstetric, pediatric, and adult medicine with public health services such as immunizations and communicable disease control. The priority is to try to reduce diseases that lead to costly hospitalization and tertiary care.

COPC's programmatic emphasis on child health is strong; approximately 20,000 of the 38,000 individuals enrolled are children. Half of the COPC physicians are pediatricians, and the Program has developed close working relationships with the Dallas Independent School District and the child health services of the county health department. Health services address the perinatal period, childhood, adolescence, adulthood, and the elderly. This framework enables the health care delivery system to focus on an individual's transition through the life cycle, rather than subcategorizing health care into specific disease-oriented fragments. The system is dependent not only on physicians, but on a broad array of nonreimbursable health care professionals, including health educators, outreach workers, nutritionists, translators, psychologists, and social workers. Each category of professionals is integral to the health care team that responds to identified needs in the COPC catchment communities.

COPC provides the following services:

- **Primary health care:** medical; dental; psychosocial; nutrition; prenatal postpartum; family planning; after-hour ancillary service; continuity in case of hospitalization
- **Public health:** immunizations; surveillance; sexually transmitted diseases prevention and treatment; WIC; health education; health planning and evaluations
- **Programs for special populations:** sudden infant death syndrome; AIDS; teenage pregnancy; cancer prevention; homeless outreach medical services; low-birthweight follow-up; Vista volunteer program
- **Support services:** laboratory; audiology; radiology; clinical psychology; pharmacy; social services; respiratory services; substance abuse counseling; outreach and case management

Two critical assumptions underlie the Program: that a medical group practice must provide a health model throughout the Program; and that a budgetary commitment is essential to recruit and retain nonreimbursable and nontraditional staff for these community-based centers. These individuals are supported through the ad valorem tax component of the Dallas County hospital district budget, and some selected grants.

A group practice was established to hire physicians within the COPC health centers. The group's initial goal was to recruit and retain 20 physicians. They sought "role model" professionals with ethnicity similar to that of the at-risk population. They hired 24 physicians during the first year, of whom 54 percent are minority, and 60 percent are women.

To address issues related to credentialing, a memorandum of agreement exists between COPC and various departments at the University of Texas Southwestern Medical School. This agreement enables clinicians in the group practice to be credentialed through the university and to attain clinical faculty status. It enables the physicians to participate in rounds and to attend to patients with the explicit goal of providing continuity of care for COPC patients admitted to Parkland Hospital. The Program also relies on the expertise of highly trained nursing staff and physician's assistants.

## Continuity/Coordination

Continuity of care for infants and young children is an important part of the overall COPC philosophy, but implementation is not fully developed. The Program's overall organizational strategy is addressing this goal in part by consolidating services with the county health department and by coordinating with other health care providers serving residents of the catchment area. Maternity services, for example, are not yet fully integrated within COPC. Some of the community health centers have prenatal care services, but all women with high-risk pregnancies are seen at the hospital clinics. Case management for such women and for high-risk infants is not routine as yet, but it has recently become reimbursable through Medicaid.

Infants and children enrolled in COPC are assigned their own primary care physician. Special projects are pilot testing new or enhanced service strategies for at-risk groups. A federal grant allows graduates of neonatal intensive care units to receive additional follow-up, while the Children's Fund Homeless Health Care Program serves about 5,000 homeless children.

## Accountability

COPC is committed to evaluation, and staff are analyzing data from the measles outbreak in Dallas County. Staff are also analyzing the effect of the Cancer Prevention and Intervention Program, which has combined a significant outreach campaign with case management, risk assessment, and risk reduction activities for the minority population of Dallas County. A culturally sensitive computerized risk assessment tool has been developed and now is being tested in conjunction with similar efforts with M. D. Anderson Medical Center in Houston.

The Program has recently completed a hospital utilization study comparing pediatric admission rates and charges in four areas of the county. The analysis sought to determine whether utilization and gross hospital charges differed in communities served by COPC and those not served by a community-based center. The four communities in the study were stratified by socioeconomic status and demographic data. The West Dallas community, which had a long-standing COPC pediatric program, had lower hospital utilization than the other three communities. West Dallas had the lowest per capita income and one of the highest proportions of minority population. Significantly, it had a lower admission rate, one of the lowest gross charges per admission rate, and one of the best collection:charge ratios, indicating that patients were becoming certified for Medicaid through the Program.

Trend analysis conducted in the 1980s indicates that with the implementation of the community-based program, the admission and emergency room utilization rates for children under 17 living in West Dallas have decreased in both Parkland Hospital and Children's Medical Center. This trend has not been found for other areas of the community whose residents come to these two centers for hospital care.

An innovative incentive pay program, tied to COPC's health care goals, is also in place for both the physicians and the entire professional staff of the care program. The program utilizes 25 objectives to measure success and the attainment of specific outcomes, and tracks them longitudinally. When specific objectives are reached, all employees receive an annual incentive bonus. One example of an objective is to decrease by 5 percent emergency room visits secondary to the complications of asthma. Activities designed to achieve this objective include a new patient reminder system for appointments, a home assessment program, and a parent education program. To facilitate the measurement of success, COPC is installing and testing a comprehensive management information system and an automated medical records system.

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## Community Orientation

The Dallas County hospital district conducted a needs assessment in 1986 that included a socioeconomic and demographic profile of the county. This provided critical data relevant to the health needs of the entire county. The methodology expanded on traditional indicators of underservice, including the criteria for federal designation as a medically underserved area or health professional shortage area. The methodology involved reviewing relevant mortality data for leading categories of death, such as cancer, stroke, accidents, infants, and coronary artery disease. The evaluators also analyzed diagnostic data and utilization patterns of patients presenting to Parkland Memorial Hospital. They coded the data to determine patient origin information, and to target communities that disproportionately rely on Parkland for episodic and hospital care. The results identified eight neighborhoods with critical health needs.

COPC conducted a survey in 1990 and 1991 to collect information about the health needs of people living in the southern part of Dallas County. The Program is using the National Health Interview Survey in collaboration with the Census Bureau and a Vista volunteer program. The data enable the Program to assess needs and consider revisions in the programmatic strategy and budget. Findings will be validated utilizing focus groups within the surveyed community.

## Program Achievements

The experience of the Dallas County health district with COPC has generated significant results in health policy, financing, organizational structure, community assessment, and health services utilization. The Program has increased health services capacity in several at-risk communities and has maintained existing services in several communities that were in jeopardy of losing their service providers. Both the Dallas County health district and the City of Dallas health department have formally adopted the Program's concept. In 1991, the city council approved the strategic agenda for the federal Department of Health and Human Services, which called for the transition of the city health department toward a model of health service delivery that embraced the concepts of COPC. This commitment was formalized through a memorandum of understanding with the county hospital district, which called for the implementation of joint planning and programming for community-based health services. Through this agreement, over $750,000 was programmed into the defined communities collaboratively, enabling previously fragmented delivery systems to be combined in several locations throughout the city.

Financing of COPC has remained a priority for the Dallas County hospital district through a separate component of the county ad valorem tax system. This rate is established annually by the Dallas County Commissioners Court, and was increased for FY 1992 to meet some anticipated increased service demands, and to expand the scope of services such as health education, outreach, and nutrition. The Program receives approximately 56 percent of its funding through the ad valorem tax base, while the remainder is derived from patient collections and 16 grants. The organizational accomplishments of the program have facilitated its budget growth from $250,000 in FY 1989 to over $9 million in FY 1992. The consolidation of several health centers under one umbrella agency has enabled the Program to utilize the money saved from reduced administrative overhead to augment services at other health centers. These enhanced services typically include nonreimbursable services, such as outreach, health education, social services, and nutrition.

# Comprehensive Health Investment Project

by Peggy Balla

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## Background and Organization

The Comprehensive Health Investment Project (CHIP) is a public/private partnership that provides health care for children and related family services in the Roanoke Valley of Virginia. At the time of CHIP's conception in 1987, children from poor families in Roanoke and the surrounding counties were receiving inadequate or inappropriate medical care. Only one pediatrician accepted new Medicaid patients, with the result that services for children were generally fragmented and offered little continuity of care.

Recognizing these deficiencies, a group of health leaders organized a meeting in Roanoke in May 1987 on child health care. Participants included private physicians, public health leaders, a state senator, local community action agency staff, and the pediatrics department chairmen from the three Virginia medical schools. This led to a task force charged to develop a working model of a new community system for child health care. The task force met for a year before actually implementing the system, and it continues to represent broad community interests. Since implementation, CHIP has added members from the business, legal, and religious communities.

The initial project was funded by a grant from the state health department to the city health department under its block grant in FY 1987. Funding increased to $200,000 annually by FY 1990, and a W. K. Kellogg Foundation grant of $1.5 million in 1989 to the local community action agency (TAP) assured program security through 1993.

CHIP's goal is to improve the well-being of children in the Roanoke Valley by using a mix of public and private resources to assure a community-based system of primary care, case management, and family involvement. CHIP's three primary objectives are as follows:

- To provide comprehensive health and family support services through a multidisciplinary network of providers
- To assure that CHIP children receive, at a minimum, the counseling and immunization services recommended by the U.S. Preventive Services Task Force and American Academy of Pediatrics
- To assure that CHIP families participate in family-focused parent education or early intervention activities

CHIP targets services to children from birth to six years of age whose families have incomes below 133 percent of the poverty level on enrollment and below 150 percent at recertification each year thereafter. An estimated 5,000 children up to age six whose family incomes are below 150 percent of the federal poverty level reside in the Roanoke Valley area. Each year since the beginning of the Project, the upper-age limit has been extended by one year so that an enrolled child does not lose CHIP eligibility because of age. CHIP's current upper-age limit is ten years. The 1,000 children currently served reside in the Roanoke standard metropolitan statistical area, which includes the cities of Roanoke and Salem and three surrounding counties. This area, comprising approximately 1,100 square miles, is about the size of Rhode Island and represents urban, suburban, and rural populations; 67 percent of the population resides in the city of Roanoke.

CHIP is incorporated as a nonprofit organization with a board of directors. Although CHIP is guided by the board, individual public agencies receive grant dollars for CHIP and are accountable for fulfilling grant requirements. The health department and community action agency are the major recipients of financial support for CHIP. However, incorporation allows CHIP to accept its own funding through a combination of public and private sources. These include the W. K. Kellogg Foundation; Maternal and Child Health Services Block Grant (Title V); Virginia Department of Health Primary Health Care Services Development Grant; donations from private sources such as Blue Cross/Blue Shield of Virginia, the Roanoke Rotary and Kiwanis Clubs; and small gifts from local churches and other private sources.

**CHIP's goal is to improve the well-being of children in the Roanoke Valley by using a mix of public and private resources to assure a community-based system of primary care, case management, and family involvement.**

## Comprehensiveness

The process of service provision and coordination is multifaceted. Basic services are case management, primary health care, and parent involvement. The Project's 20 full-time and three part-time staff members include public health nurses, family intervention specialists, a parent involvement specialist, administrators, and a driver.

Through outreach efforts and referrals from networking agencies, CHIP identifies children in need of services and schedules an initial enrollment interview at the local health department nearest the child's home, during a home visit, or at the CHIP office. CHIP public health nurses and family intervention specialists conduct an in-depth assessment of the child's and family's needs focusing on the following areas: primary health care needs, including provisions for well-child and chronic care; nutrition; dental care; and parenting education and support, job skills, and other social service needs. Each family receives a home visit by a family intervention specialist who conducts a family needs assessment to more completely evaluate the nonmedical needs of the family.

Health departments and a drugstore chain provide pharmacy services at rates comparable to the health department's. In rural areas, local pharmacies participate in a special arrangement with the health department whereby the health department replaces pharmaceuticals used by CHIP patients. The medical providers supply laboratory services.

All children enrolled in CHIP are assigned a "medical home." Private physicians provide all routine well-child and acute care on a 24-hour-day, seven-day-a-week basis, just as they do for their private patients. If children do not have Medicaid coverage (about 24 percent), physicians receive a fee based on Medicaid rates. Developmental and other preventive screenings are not billed as EPSDT services as yet. Upon enrollment, children are also assigned a dental provider from either the private sector or the health department. Pedodontists participating in CHIP provide most of the complex dental care. CHIP contracts with 34 physicians and eight dentists to provide care for participating children.

CHIP's parent involvement component addresses the complex needs of families through interventions focused on the values inherent in family-centered care and participation. Family intervention specialists work most intensively with families with children under two. They make home visits to discuss normal growth and development, share information with parents about normal milestones for their child, and help parents select activities that enhance development. The CHIP staff also facilitate parenting classes and meetings. The Project publishes a monthly newsletter about parenting, child development, and health. CHIP also employs a parent involvement specialist with a background in early childhood development, to coordinate parent group activities; to see families requiring more intensive, complex intervention; and to consult with nursing and family intervention staff about child development and early intervention issues.

The Project provides the supportive services necessary to encourage full parent participation in all of its activities. Transportation is available on an as-needed basis for health care appointments, parent meetings, classroom training, job placement activities, and so forth. A toy lending library housed at the CHIP office contains a basic collection of durable, safe toys that encourage physical, social and emotional, language, and cognitive development. Staff receive instruction in the proper procedures for disinfecting toys before circulating them from one family to another, and they encourage parents to make their own toys from inexpensive materials.

## Continuity/Coordination

The public health nurse functions as the case manager, or care coordinator, for each child and family. Together with the family intervention specialist, physician, and family, the nurse develops a plan to link families with community resources and provides education to help them make appropriate decisions. The care coordinator and the family intervention specialist, working as a team, monitor the service plan, track the utilization of services, and identify barriers to obtaining services.

CHIP provides several levels of case management to enrolled children, depending on the level of risk. Services to infants and toddlers less than two years of age who meet state criteria for being at high risk can be billed to Medicaid. However, the criteria are restrictive in practice and apply to few children.

CHIP maximizes the use of existing community resources for enrolled children and families by collaborating closely with the network of local health departments for preventive services such as immunizations, WIC and related nutritional services, pharmacy services, and dental care. The Project also works closely with the regional Children's Specialty Services (CSS) to provide specialty care. Children with conditions requiring care not within the scope of CSS are seen by local specialists. The Project also maintains linkages with local hospitals and other human services agencies, such as mental health and social services.

## Accountability

CHIP's system of accountability is built on quarterly and annual reports, as well as the Project's internal service statistics. The current management information system maintains demographic data on enrollees and contains information provided by private physicians and dentists with regard to types of visits made and diagnoses. CHIP handles billing for children not enrolled in Medicaid, and Blue Cross/Blue Shield of Virginia is assisting in the development of a more sophisticated management information system. The American Academy of Pediatrics guidelines for basic preventive care guide local physicians' practices. A new evaluation will help establish a link between CHIP and specific outcomes.

## Community Orientation

CHIP did not conduct its own formal analysis of the needs of the target population. Rather, staff relied on existing sources of information and discussions with community leaders. The health care needs of the target population of children in poor families have not been assessed completely, but staff believe that eligible children not enrolled in the Project rely on the health department for preventive services, and on private physicians or the hospital emergency room for acute care. Plans to expand CHIP capacity further are uncertain. Discussions are under way to convert Roanoke Memorial Hospital's pediatrics residency program to a primary care practice that participates fully in CHIP.

From a community perspective, CHIP's strengths lie in the community support and key leadership it has built and sustained. This sense of community has increased the capacity of people to work together to deal with problems of major concern. The close cooperation and interest of those involved has helped propel the project forward while minimizing bureaucratic constraints, allowing for creativity and flexibility in the service delivery system. Clearly, CHIP has successfully integrated public and private medical and social resources in the Roanoke Valley, in part so that children can receive medical care. In addition, CHIP has added multiple services for low-income parents, such as education, transportation, and coordination of services and referrals.

Physician representation on the board is a strength. It allows physicians to bring issues for discussion and for problem-solving. Physicians have taken a key leadership role in the development and expansion of services.

The system is also designed to be user-friendly to parents and children. It works to enable families to understand and to feel confident entering and using the private medical care system.

**Case management helps achieve collaborative working relationships across agency boundaries. This helps to meet the needs of children in an integrated manner by getting providers from categorized systems—social services, mental health, education, and others—to work together.**

## Program Achievements

CHIP's approach demonstrates the benefits of sharing of responsibilities between health departments, community agencies, and the private sector for the delivery of primary health care for children. This care has been fragmented in the past, with the result that indigent children received care at emergency rooms, health departments, and hospital clinics that do not offer access on a 24-hour-day, seven-day-a-week basis. Coordination of services across multiple sectors has also helped reduce fragmentation. Case management helps achieve collaborative working relationships across agency boundaries. This helps to meet the needs of children in an integrated manner by getting providers from categorized systems—social services, mental health, education, and others—to work together. Additionally, CHIP has opened the door to the private-physician community for children who previously did not have access.

## Statewide Replication

The W. K. Kellogg Foundation has funded the Roanoke community action agency (TAP) to assist in replicating CHIP in 20

Virginia communities over the next four years. The plan for replication calls for the establishment of the CHIP model with the same three partners: public health practitioners, private practitioners, and community action agencies. Lessons learned, which will guide replication efforts, are as follows:

- Include strong leadership at the community level, and keep state leaders informed and involved.
- Begin early to look for sources to fund innovative projects, including state and local government funding to assure long-term survival.
- Try to incorporate evaluation in the planning stages of program development.
- Be willing to cultivate, unify, and link different perspectives and operational styles that public and private partners bring to this type of collaboration.

The replication effort will undoubtedly bear mixed results. Professional prestige and competence vary among county health department officials in Virginia, which contributes to lack of trust and communication between local private physicians and health department staff. The Virginia chapter of the American Academy of Pediatrics, which is working independently with physicians in three communities in the state to adapt the CHIP model to local circumstances and resources, is watching this effort with interest.

# Pediatric Resource Centers

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## Background and Organization

By 1984, it had become apparent that a fresh look at the delivery of pediatric health services in New York City was needed. Significant population shifts, coupled with dwindling MCH Block Grant support, required that the Children and Youth (C&Y) Projects, which had been funded since the 1960s under Title V, be reexamined. From 1979 to 1983, federal funding to New York City for pediatric services declined by 42 percent, from $6.8 million to $3.9 million. It dropped further, to $3.3 million, in 1984. As a result, one C&Y Project was closed, and a second was scheduled to be closed. During this time, a survey conducted by the Medical and Health Research Association (MHRA) determined that 339,000 children and families under 185 percent of the poverty level and without Medicaid coverage were residing in the city. Since the resources available were clearly not sufficient to target the entire needy population, the New York State health department, MHRA, and the New York City health department established the Pediatric Resource Centers (PRCs), targeted to high-risk children, in an effort to assure that at least those children most at risk would receive comprehensive health care.

The PRCs were modeled after the C&Y Projects and were to provide high quality, family-centered, comprehensive primary care to low-income children and adolescents. Services were to be limited to children and adolescents up to 18 years of age who were at particularly high risk for poor health outcomes, from households with incomes at or below 185 percent of poverty, and living in high-need service areas.

The eligible population is divided into two priority groups. The Priority I group consists of children of parents with a history of, or conditions predisposing to, child abuse or neglect; children who are failing to thrive or who have significant nutritional problems; children under age four who weighed less than 2,000 grams at birth; sheltered or dislocated children and families; children of adolescent parents; siblings of any of the above; and adolescents who are parents. The Priority II group comprises children under age four who weighed 2,000–2,500 grams at birth; children with elevated lead levels; children with severe chronic conditions; children with other significant medical diagnoses or problems requiring frequent and comprehensive health care; and siblings of any of the above.

MHRA administers the PRC Program under contract with the city health department, which receives MCH Block Grant funding from the state health department for this purpose. Currently, eight PRCs (five of which were previously C&Ys) are operating in nine sites. Four sites are located in municipal hospital outpatient departments, three are freestanding facilities under the auspices of voluntary teaching hospitals, one is a freestanding community health center, and one is a community-based satellite of one of the municipal hospital PRCs.

During the 12-month period ending March 1992, a total of 29,591 patients were seen and 106,317 visits were generated. Of all PRC patients, 59 percent belong to the Priority I group. In all, 58 percent are under age five, 90 percent are either African American or Latino, and 75 percent reside in high-need health areas of New York City.

Each year, MHRA evaluates each project to determine the extent to which it is fulfilling measurable objectives related to accessibility, availability, comprehensiveness, continuity, coordination, and accountability. MHRA also reviews productivity and patient volumes. The PRC Policy Council has established a productivity standard of 2,800 encounters per full-time pediatrician per year. Although the federal standard for primary care providers in community health centers is 4,200 encounters, it was felt that proper care for the children of these very high-risk families, who experience multiple complex problems, requires additional time.

Documentation and data analysis are considered essential and receive more attention in this program than in most others. The model is clearly documented using explicit goals and objectives. Data not only drive program planning, but also are used to justify proposals to major funding agencies. Evaluation takes place through review and analysis of project data collected via the PRC Data Reporting System, site visits, chart reviews, and quarterly fiscal reports. The results of various analyses are presented in a project-specific document (entitled "Compliance with the PRC Model" and available through MHRA). Findings, which are discussed with each PRC, form the basis of annual program and budget reviews. The document contains sections for each of the elements reviewed, lists standards pertaining to each of these, and presents site-specific evaluation findings.

Following is a description of each of these model elements, along with the evaluation methodology for each.

## Accessibility and Availability

All of the PRC sites must provide easy access for high-risk, low-income children. Programs are expected to carry out community outreach and education and to establish linkages with appropriate organizations to facilitate their referrals of clients in need of health services. PRC enrollment has climbed steadily since the program's inception.

Assuring that primary care is available during daytime hours, five days a week, improves access. Two of the sites now offer services on Saturdays, as well. Time-specific rather than block appointments are encouraged, and waiting time is expected to be less than one and one-half hours. In addition, programs must provide some form of after-hours coverage with the potential for patient contact with a pediatrician.

Programs provide all preventive services—health maintenance, screening tests, and immunizations—free of charge to all patients, regardless of age and income. They provide treatment services on the basis of a sliding fee scale, and no-fee categories have been established for those patients in families with incomes below 100 percent of the federal poverty level.

Since the MCH Block Grant provides only 28 percent of the PRC program's funding, the program has always recognized the need to maximize alternate sources of revenue. The strengthening of Medicaid screening and enrollment procedures is particularly important now in light of the recent expansions in Medicaid eligibility. While issues of residency status, manpower, staff, and patient

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motivation continue to affect the degree of success in this area, the proportion of the population served that has Medicaid increased from 50 percent in FY 1987 to 68 percent as of March 1992.

MCH Block Grant funds are earmarked to the medically indigent, thus maximizing financial access to enriched services for those children most in need. Block grant funds also support services to Medicaid-covered children, since the reimbursement provided does not cover the total cost of comprehensive care. The extent to which a project is accessible and available to its patient population is evaluated by reviewing information obtained from site visits, project reports, and the PRC Data Reporting System.

## Comprehensiveness

Each PRC has interdisciplinary teams that offer, at a minimum, medical, nursing, social and family support, nutrition, vision, and speech and hearing services. Recognizing that parents need skills and social support, PRCs have recently added parenting programs. Harlem Hospital, for example, has initiated a program for families with histories of child abuse. Other diagnostic and treatment services—including mental health, dental, specialty and in-hospital services—are available by referral to each project's parent institution or affiliate.

Standards of comprehensiveness were developed for all Priority I conditions with extensive input of PRC medical directors. For each condition, three levels of severity were devised. Children at the most severe level (III) require a physical assessment by a doctor; a nutritional assessment, often by a nutritionist; a psychological/developmental assessment by a doctor, a midlevel provider, or an appropriate specialist; and a family social assessment by a social worker. Home visits are often required, particularly if the social worker is not in contact with the city agency that handles child protective services.

Chart reviews are conducted annually using condition-specific abstract forms, and results for each PRC are tabulated by condition and by level of severity. Degree of compliance is measured by looking at the number of required referrals that were made, as well as the number of required referral services that were received. In 1992, comprehensiveness ratings ranged from 66 to 93, with an average total program rating of 79.

The overall findings have been useful not only for focusing on specific problems within a PRC, but for giving guidance to MHRA in areas where the projects need further support. For example, the findings on the difficulties in addressing the needs of families with parenting problems and on the lack of resources for mental health services led MHRA to employ a psychologist to undertake an on-site survey of these services to specifically identify what additional resources were needed.

As a result, funding was provided to each project to hire or increase the time of key personnel. This was followed by the provision of both centralized and on-site parenting training to PRC staff. Although the level of success continues to vary widely, each site now has an established parenting program that receives referrals.

The comprehensiveness findings have also highlighted the difficulty in providing consistent social work services to these high-risk children. Retention of social workers has been particularly problematic because of the often superior salaries and vacation policies several large New York City bureaucracies offer. This, coupled with the difficult working conditions of ambulatory clinical settings, makes for a degree of turnover among PRC social work staff that can be disruptive to the continuum of care.

## Coordination

In addition to assigning each patient to a primary care provider who works as team leader with a constellation of support staff, programs maintain formal linkages with the other health care resource agencies that patients need. These linkages are to assure the timely exchange of information concerning hospital admissions, referrals for subspecialty care, and referrals of children no longer eligible for PRC care.

Assessment of coordination is also derived through chart reviews and is measured by determining how frequently referrals made are completed. Thus the degree of success projects have in actually providing referral services to their patients is interpreted as an extension of their ability to coordinate their overall services. In 1992, combined findings ranged from 65 percent to 92 percent, with an average of 85 percent of referrals completed. The evaluation of coordination also includes an annual review of the projects' in-house procedures and systems that allow for follow-up of subspecialty referrals, laboratory reports, and emergency room visits.

## Continuity

Having a "provider of record," who directly serves a given patient on more than half of that patient's primary care visits, assures the child's continuity of care. If no provider meets this definition, the child is said not to have a primary care provider. The PRC directors established as a goal that 90 percent of each patient's primary care visits be with the same provider. In 1992, continuity ranged from a low of 49 percent to a high of 81 percent, with an average total program rating of 70 percent. Continuity in the PRCs has improved over the past several years and continues to be far superior to that of the great majority of ambulatory care facilities in New York City.

These continuity of care measures provide a reasonable index of the ability of a PRC to have one primary care provider responsible for each child's care. When the many complex factors potentially impacting on continuity were considered, it was concluded that a project's diligence in implementing continuity was the most important factor; use of house staff, broken appointments, and walk-in rates were not found to be related to the overall achievement of continuity.

## Accountability

All of the projects are required to have active quality assurance programs. On a quarterly basis, they must submit evidence of such to MHRA, including policies and procedures, minutes of meetings, review findings, and corrective action plans, and they must submit updated procedures reflecting any changes on an annual basis. A roster of committee members, a list of topics to be discussed in the next fiscal year, and the schedule of planned meetings are also required each year.

While most pediatric programs must have some type of quality assurance activity, the extent of it varies, depending on administrative priorities, staffing resources, caseload, and so on. The accountability component of the PRC evaluation thus serves two purposes: to motivate the projects to review certain elements of care on a regular basis and develop corrective action plans for each identified deficiency; and to provide MHRA with information on the quality of services being provided.

Each year's evaluation culminates in site-specific program review meetings, which are used to discuss project strengths and weaknesses and to develop corrective action plans for the following year. Projects are asked to revise their budgets as needed and to respond in writing to the program review findings. Goals become part of each project's contract with MHRA for the following year, with a clear caveat that failure to move toward them may result in funding cuts. MHRA then monitors progress throughout the year.

In addition to this evaluation of process, MHRA has completed a three-year study to assess the effectiveness of the PRC model in producing positive child health outcomes. Although the literature supports such a model of pediatric health care, no systematic evaluation of it has ever been done. Support for the study was provided by the Health Resources and Services Administration of the Department of Health and Human Services, MCH Block Grant funding, and the William T. Grant Foundation.

The three risk groups selected for inclusion in the study were low-birth-weight children (under 2,500 grams), children of adolescent parents, and adolescent mothers. Researchers examined and interviewed the PRC participants upon their entry into the program, and again approximately one year later. At the later date, they also examined and interviewed a comparison group who had never received care at a PRC but were similar in all other respects. Analysis of the findings demonstrates a positive correlation in the majority of cases between use of PRCs and functional health status, particularly in regard to infant weight gain and lowered morbidity. Children who visited the PRCs also received more appropriate and timely pediatric care, including immunization, than the group using other sources of medical care.

**In addition to assigning each patient to a primary care provider who works as team leader with a constellation of support staff, programs maintain formal linkages with the other health care resource agencies that patients need.**

# Hawaii's Healthy Start–Family Support Services Program

by Gail F. Breakey, with contributions from Loretta Fuddy

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## Background and Organization

The Healthy Start–Family Support Services Program in Hawaii,* piloted in 1985–1988 and expanded in 1989, provides home visiting and family support services to families of newborns considered to be at high risk of abuse and neglect. The Program is funded with direct state legislature appropriations and managed by several private agencies through purchase-of-service contracts by the MCH branch of the state's department of health. In fiscal year 1991, more than 8,000 mothers underwent assessment for the presence of risk factors; of these, approximately 20 percent were determined to be at risk and offered home visiting services. As of September 1992, no child abuse or neglect was reported for 99 percent of the 2,200 families served. The health department is negotiating with Medicaid to make home visiting services and case management eligible for reimbursements—which could enable the program to reach all at-risk infants statewide.

Healthy Start was designed as a pilot effort to prevent child abuse and neglect, and was modeled after Henry Kempe's projects in Denver. The Hawaii Family Stress Center of the Kapiolani Medical Center, in collaboration with the department of health, implemented a three-year demonstration program in 1985 with $200,000 per year. In 1989, the program was expanded to 12 sites statewide through contracts with seven private community agencies. Program components are described below:

- **Screening and assessment of families at time of a new birth.** Program staff review hospital maternity admissions on a daily basis to identify families residing in program catchment areas. If the medical record indicates any of 15 established risk factors for child abuse and neglect, staff members interview the mother to assess the risk factors and score the level of risk in the infant's household—based on the Kempe Family Stress Checklist. They encourage positively assessed mothers to accept home visiting services and refer them to their neighborhood Family Support Services Program.
- **Home visiting.** At-risk families may receive home visits, on a voluntary basis, for up to five years. Initially the visits are weekly, but the intensity and frequency diminish as risk factors decline. Home visitors receive five weeks of training. Their 1992 caseloads averaged about 25 families per worker.
- **Child health and development.** Child development specialists conduct Caldwell NCAST and HOME assessments** and monitor child development, immunization status, and well care. Workers promote bonding and attachment between mother and infant, and identify a "medical home" for the infant. Children with identified developmental delays are referred to a Zero to Three program coordinator.
- **Referral and coordination with community services.** Home visitors fill out applications for public housing and seek emergency funds and food and infant supplies as needed. Families can be referred to spouse abuse shelters and drug abuse programs.
- **Program management and monitoring.** The state health department's Maternal and Child Health Branch and service providers establish goals and objectives for the entire program. Its personnel meet quarterly with Healthy Start providers to plan and review data collected. The department manages the client tracking system, which serves as the foundation for program assessment.

This Healthy Start Program supports the health department's efforts to create a comprehensive system of health services for at-risk, disadvantaged young children and their families. To date, implementation of the child health and development component of Healthy Start has been uneven because family survival needs and crises occupy much of the workers' time. The addition of child development specialists is strengthening this component.

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* *See Glossary for a description of the federal Healthy Start initiative, which is different.*

** *NCAST (Nursing Child Assessment Satellite Tracking) was developed by the School of Nursing, University of Washington; HOME (Home Observation for Measurement of the Environment) was developed by Bettye Caldwell and Robert Bradley at the University of Arkansas.*

Operational relationships between Healthy Start and the following efforts are still evolving, guided by child health principles developed in 1979 by the Hawaii Medical Association, the Hawaii chapter of the American Association of Pediatrics, the Kapiolani Department of Pediatrics, and the health department:

- Perinatal outreach enrolls underserved pregnant women in prenatal care. Women receive health education and counseling services at two sites.
- The Physician Involvement Project builds physician awareness of the need for "medical homes" and conducts training to promote this concept.
- The Zero to Three Program under P.L. 99-457 provides developmental services to environmentally, biologically, and developmentally at-risk children, as well as to children with developmental delays. Hawaii is one of very few states to use the environmental risk category in establishing infants and young children as eligible for Zero to Three services.
- Health care from time of birth is covered by the Well Child Supervision Bill and by EPSDT Medicaid coverage. Hawaii's State Health Insurance Plan (SHIP) for the medically indigent also helps to assure coverage.

## Accessibility

Entry into the Healthy Start–Family Support Services Program depends on the presence of risk factors in the family, not means-testing. However, the majority of screened high-risk mothers are low-income, have unemployed partners, and live in inadequate housing. The Program is currently available to half of all newborns, in many cases beginning during the mother's pregnancy. Participation is voluntary, and 80–90 percent of the identified at-risk families accept services, depending on the site. Because of lack of funding, in FY 1990–1991, only 58 percent of the 1,688 families screening positive (21 percent of all screened) were enrolled in the Family Support Services Program.

## Comprehensiveness

Assessment and identification of high-risk families account for about 15 percent of the Healthy Start budget. Early identification workers go to the maternity wards five or six days a week to discuss new admissions with the hospital social worker and to conduct interviews with mothers whose medical records indicate at least one risk factor (about 40 percent of those potentially eligible). Workers also increasingly assess pregnant women in prenatal clinics for family risk factors.

**Hawaii is one of very few states to use the environmental risk category in establishing infants and young children as eligible for Zero to Three services.**

The child development specialist or a consultant conducts NCAST and HOME assessments for participating families at scheduled intervals. Using the Revised Denver Prescreening Developmental Questionnaire, the worker screens the child's development status. The results assist in determining the case plan for each family. The services to which families were referred most frequently in 1991 were health and nutrition services. A medical home could be identified for 92 percent of families. Other services used frequently included respite care, domestic violence centers, drug abuse treatment, child care, financial assistance, housing, mental health, and legal assistance. As families become more stable, workers make referrals for job training and continuing education, referring children to Head Start or a state-subsidized child care subsidy program (if available) at age three.

## Coordination/Continuity

The health department coordinates the Family Support Services Program with other public health programs. The seven private agencies, under contract to the health department, manage the program with assistance from the department's Maternal and Child Health Branch. These agencies, for example, establish their own agreements with the hospitals and medical centers that deliver babies, and they establish working relationships with pediatricians and public health nurses to serve Healthy Start children.

Healthy Start workers routinely link the family with a primary health care provider, if the family does not already have a pediatrician. Workers track well-care visits and the immunization schedule through computer printouts, and try to assure that visits are scheduled and kept. Problems include frequent changes of doctors and difficulty in monitoring care, including immunizations. The EPSDT program has not been implemented to any great extent in Hawaii, despite increases in physician reimbursement rates for preventive services and well-child examinations. The Maternal and Child Health Branch, the state Medicaid agency, and the AAP chapter, however, are currently working to develop standards and objectives for greater EPSDT implementation.

## Accountability/Replication

The state health department's Maternal and Child Health Branch developed a management information system for Healthy Start that records initial outreach, assessments, home visitor activities, and referrals to other services for each family. Healthy Start reports outcomes for child abuse and neglect to the state legislature, and health department staff are planning a more detailed evaluation to examine the full range of family and child outcomes. The Program has reduced the risk scores for more than three-quarters of the families who have received services. Only a few cases of child abuse or neglect have been documented among families who have received services—substantially lower rates than among families who have not received services.

A quality assurance plan has been in place for Healthy Start for several years. It outlines procedures for promoting program effectiveness with clients. The plan calls for communication between social services and health department staff about families referred to child protective services or those who do not cooperate with Healthy Start home visitors. A 10 percent random sample of records is reviewed annually by the department for each program component. The state health department is establishing immunization tracking for two-year-olds that will be coordinated with Healthy Start.

The Healthy Start Program has been replicated from a pilot project to 11 additional sites. Key features have been replicated, and some sites have added new components, such as a toy lending library. It has also been replicated in Arizona and Virginia. The Hawaii Family Stress Center is collaborating with the National Committee for Prevention of Child Abuse through a Ronald McDonald's Children's Charities grant to replicate the program at sites in at least 24 states.

# Mississippi's Perinatal High Risk Management/Infant Services System

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## Background and Organization

High-risk pregnant women and infants in many of Mississippi's counties receive intensive case management for their health care and social service needs through the Perinatal High Risk Management/Infant Services System (PHRM/ISS). Funded by Medicaid but carried out primarily by health department staff, PHRM/ISS was designed by the state health department, which provides prenatal care for 54 percent of all women who deliver. This Mississippi program was developed without a waiver, in response to 1986 COBRA Medicaid provisions for enriched services and targeted case management. It was modeled in part after the South Carolina High Risk Channeling Project, with input from a variety of other state and national leaders. A Medicaid state plan amendment, designed with assistance from the Health Care Financing Administration's national and regional office staff, integrated infant services with EPSDT visits to allow monthly reimbursement for services for high-risk infants for 12 months. An interdisciplinary team consisting of a physician, nurse, social worker, and nutritionist provide a comprehensive array of services to pregnant women and high-risk infants throughout their first year.

Long-term goals are to improve birth outcomes and infant health by reducing the number of low-birthweight infants; reducing neonatal intensive care costs; and lowering infant mortality and morbidity by ensuring that high-risk pregnant women and infants receive early, continuous, comprehensive, and risk-appropriate services. In 1991, 2,151 women with high-risk pregnancies and 597 high-risk infants were referred to county health departments. The program's case management goal is not only to help women over and around major obstacles to care, but rather to remove the obstacles themselves by promoting system change as indicated by consumers' experiences. Services include medical risk assessment, individualized case management (care coordination), psychosocial assessment and counseling, nutrition assessment and counseling, nursing assessment and counseling, home visiting, health education, postpartum family planning services, transportation, and Medicaid eligibility assistance.

The target group is high-risk pregnant women and infants throughout the first year of life who are Medicaid recipients. Mississippi has set Medicaid eligibility for this group at 185 percent of the federal poverty level. In 1991, 63 percent (26,786) of all women giving birth had their deliveries paid for by Medicaid. About 30 percent of all pregnancy screenings have revealed risk factors, and 20 percent of infants born to mothers on Medicaid have been identified as high-risk.

Medicaid sets reimbursement rates in conjunction with the state department of health. Although state legislation mandates that the department of health match federal funds at a 20:80 ratio, other public and private providers may become case management providers if they can assure that they can offer a full array of interdisciplinary services either directly or by contract. In late 1991, 37 approved providers in 32 of Mississippi's 82 counties were reaching approximately 25 percent of the target group.

## Accessibility

Findings from a federally funded demonstration project* in northwest Mississippi helped in the design of program strategies to improve access in the statewide PHRM/ISS model. All women in Public Health District I (the nine northwesternmost counties) who came for fewer than five prenatal care visits were the high-risk group interviewed in the study. The hypothesis was that women who encounter barriers to prenatal care would also encounter barriers to health care for their infants. Access barriers identified by 256 women in a survey were initially financial, but with the increase of Medicaid eligibility to 185 percent of the federal poverty level, financial barriers dropped substantially. Other important barriers (not mutually exclusive) were: transportation (38 percent); "already knowing what to do" (23 percent), which seemed to mean the family had other priorities; the woman's not wanting her family to know she was pregnant (20 percent); long wait at the clinic (15 percent); and long wait to get a first appointment (11 percent).

**About 30 percent of all pregnancy screenings have revealed risk factors, and 20 percent of infants born to mothers on Medicaid have been identified as high-risk.**

The project worked with the interagency Medical Access Task Force to address policy changes indicated by these barriers and other barriers to perinatal health care identified by telephone callers using the governor's service line number. Several actions helped eliminate barriers: raising Medicaid eligibility to 185 percent of the federal poverty level; eliminating resource requirements; instituting continuous eligibility for mothers and then for infants; allowing Social Security application via the birth certificate; eliminating a health department fee for teen pregnancy testing; creating a Medicaid-reimbursable health department transportation fund in each county health department; and making a two-page Medicaid eligibility form available in all public health sites, as well as in community health centers and disproportionate-share hospitals.

For infants alone, the top risk groups were those born to women who had made fewer than five prenatal care visits; those with a birthweight under 2,000 grams; those with a mother younger than 15 years; and those who had been in neonatal intensive care units. Concerning outcomes, when an intervention group of high-risk mothers received case management services, a district that normally experienced at least seven infant deaths reported no such deaths. The postneonatal mortality rate dropped by 37 percent in an impoverished area of the state over a six-year period.

## Comprehensiveness

Every physician who sees perinatal patients in the areas where PHRM/ISS services are available receives reimbursement for a medical risk screen on a mother or infant. These physicians then make referrals to a PHRM/ISS provider, who assigns a case manager on the basis of the predominant risk factor or caseload. The family is invited to participate and receives nutritional, nursing, and psychosocial assessments. Findings are translated into a care plan that the interdisciplinary team

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** The Postneonatal Death Impact Project was funded by the Maternal and Child Health Bureau as a Special Project of Regional and National Significance from 1988 to 1989.*

reviews monthly. The family sets priorities in relationship to professional counseling regarding their risk factors.

The interdisciplinary team supplements ongoing case management with counseling, home visiting, health education, transportation reimbursement, and tracking of both health department and interagency services. Psychosocial assessments identify personal and family strengths, as well as psychosocial risks, economic problems, and other stresses. Comprehensive perinatal psychosocial services aim to help the patient understand and deal effectively with the biological, emotional, and social challenges of her pregnancy. Counseling assists patients and families in appropriate decision making and self-advocacy to overcome existing and future barriers to health care. All high-risk pregnant women receive nutrition education to enable them to provide an appropriate diet for themselves and their children. Family planning counseling is an integral part of the service.

Barriers encountered are addressed at both micro and macro levels. The health department plans to hire a perinatal substance involvement coordinator to network existing resources, provide training, and identify new funding sources as backup for one of the emerging health problems for the perinatal population.

## Continuity/Coordination

The same case manager who works with the pregnant woman provides continuity of services by being the family's case manager if the infant is at high risk. If the risk criterion is one of those utilized for P.L. 99-57, the case manager will follow the infant to age three and then assist the family to make the transition to services provided by the state department of education. Each month, the interdisciplinary team reviews the care plan at a conference convened by the case manager on the basis of concerns expressed by the family.

Case management is a key piece of the program, providing outreach, home visiting, rescheduling of missed appointments, and linkages with other services. The case manager maintains a case log and tickler file, updates the tracking system, and is responsible for Medicaid billing. Home visiting provides an opportunity for the team to assess the home environment and to provide a more comprehensive understanding of the needs, constraints, and supports available at home. Health education services are related to medical risk of the mother or child and also to appropriate parenting skills and child care plans. Limited caseloads (averaging 50 families) encourage team members to provide in-depth services to families and to document systems barriers to be addressed at the policy level.

In July 1990, when federal legislation stipulated that community health centers were to receive at-cost reimbursement, the Mississippi legislature mandated at-cost reimbursement for health departments, as well. This legislation resulted in greatly increased reimbursement, but the lump-sum monthly payment has proven difficult to administer in cases where personnel leave and positions remain vacant.

## Accountability/Quality Assurance

Medicaid and health department staff meet monthly to develop program standards, create audit tools, and address program needs. However, a state hiring freeze has made staffing exceedingly difficult at the state and county levels. Each team member in a county health department is supervised by the health department district professional supervisor of the same discipline. The district supervisor makes at least 10 observational audits annually during patient interviews, and at least 10 charts are audited annually at the district level. Evaluation plans are under way to analyze birth outcome data for women who receive case management services under this program.

Each month, social workers and nutritionists send two "case stories" to district supervisors, who send them on to the state professional consultant for additional quality assurance review, systems problems intervention, and policy change recommendation. One story reflects excellent professional performance, and the other points up examples of systemic barriers encountered. Training emphasizes the appropriate documentation of professional assessments, the development of interdisciplinary care plans, and the assurance that chart notes adequately reflect that the care plan has been actualized or revised. Only experienced licensed professionals are hired for this program, a requirement that has created great problems in efforts to maintain a full team, because private-sector salaries are higher.

## Conclusion

The Perinatal High Risk Management/Infant Services System is a creatively designed state model. However, its interface with Medicaid eligibility and the state's employee hiring system has created barriers to full program implementation. Statewide expansion of PHRM/ISS is feasible if salaries are raised for state employees, if vacant positions are filled, and if the 20 percent state Medicaid match can be generated in order to make federal funds available. A state health department estimate is that a total of $12 million for the program will expand it statewide and cover nearly all pregnant women and infants in the target group. Districts and counties are implementing the program gradually, depending upon the priorities of their chief health officers and their ability to hire new staff. Configuration and assignment of PHRM/ISS team member responsibilities is flexible, and each district and county office may implement the program somewhat differently.

Infant and child health services are developing in many areas of the state, despite a chronic shortage (and even loss) of primary care physicians willing to practice in impoverished communities. State budget cutbacks have eroded the public health infrastructure, as evidenced by the health department's semiannual study revealing increased waiting times for maternal and child health services throughout the state. A recent statewide survey of immunization coverage indicated that by age two, approximately 73 percent of children had completed the recommended series, and 80 percent had received the first doses. Head Start, which serves more than 22,000 children in Mississippi, coordinates with the health department and other providers to conduct EPSDT screenings.

Medicaid reforms have made a major difference in improving access to health care for infants and children. Infant mortality has dropped substantially, and larger numbers of children are now seen for well-child care. Medicaid eligibility workers have been stationed at 35 prenatal care sites. Some indications point to positive changes in Medicaid certification, but many children over age one do experience gaps in service eligibility.

The strength of this Mississippi initiative comes from its interdisciplinary design and commitment to family needs throughout the infancy period. The Program relies on a solid foundation of professional nursing, social work, and nutrition supervisors in each of the nine public health districts, who maintain professional quality assurance and expertise in identifying local resources. The weaknesses stem from state hiring policies and budget pressures. It is hard to build an enriched service system within a public health infrastructure that is continually being cut back. Mississippi's perinatal service system for Medicaid recipients is well worth expanding within the state. Many of its features are worth replicating nationally.

**The strength of this Mississippi initiative comes from its interdisciplinary design and commitment to family needs throughout the infancy period.**

# South Carolina's Comprehensive Health Care System for Infants and Children

by Marie C. Meglen

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## Background and Organization

South Carolina's Department of Health and Environmental Control (DHEC) serves the people of the state as the authority, guardian, and advocate in all matters relating to public health and personal health services. The department's central office is organized into program or service bureaus. The Bureau of Maternal and Child Health, one of the bureaus, aims to improve the health status of women of childbearing age, mothers, children, and adolescents in South Carolina.

Funding for this bureau comes from state-appropriated funds, federal funds (Title V, Title X, and others), earned revenue, and private sources. Under the leadership of the DHEC commissioner, several task forces have addressed systemic health problems in the state, including the Obstetric Task Force, Neonatal-Pediatric Task Force, Family Practice Task Force, and Dental Health Task Force. These task forces have been extremely successful in initiating public/private partnerships at the county level to improve access to services, communication among providers, and the creation of referral networks.

Within the past decade, DHEC has assumed more leadership and responsibility for organizing systems of personal health services for poor pregnant women, infants, and children. Lessons learned in implementing the perinatal High Risk Channeling Project (HRCP) have helped to develop strategies for improving systems of child health services, and to recognize the benefit of screening for risks and offering enhanced services to address the special needs of at-risk mothers and children in poverty. Specifically, mechanisms for conducting risk assessment during pregnancy and at birth, facilitating cooperation between public and private providers, and linking women to enhanced services have been employed productively.

## High Risk Channeling Project for Pregnant Women and Infants

The goal of the High Risk Channeling Project (HRCP) is to reduce fetal and neonatal mortality through regional systems for perinatal services. Although DHEC had long funded specialized services for women at high risk for medical complications during pregnancy, and repeatedly demonstrated that their outcomes were good, the state's infant mortality rate remained unacceptably high. Special studies of all high-risk women and their outcomes conducted in the late 1970s revealed that high-risk patients with poor outcomes were those not receiving risk-appropriate specialized care. The studies further showed that these were the patients funded through Medicaid.

As a result, in 1984, DHEC and the Health and Human Services Finance Commission (HHSFC) requested a HCFA waiver that would require all Medicaid women to be screened and channeled to the source of prenatal, delivery, and infant care appropriate to their risk. After many delays, HCFA granted the necessary waiver, and the program became effective in April 1986. All Medicaid providers in the state are now required to record medical risk factors for all pregnant Medicaid recipients and their newborn infants on a special form. They obtain Medicaid reimbursement for this service. A copy of the risk assessment form is sent to the county health department to initiate case management, and another copy is sent to the state Medicaid agency for specialized services claims processing. All infants born to HRCP mothers, whether low- or high-risk medically, are eligible at birth, and infants who are assessed at birth as high-risk and who are Medicaid recipients are eligible, even if their mother is low-risk or not an HRCP participant.

Medicaid-reimbursable services through the HRCP include prenatal medical care provided by an obstetrician; delivery at a level II or III hospital; social work assessment and treatment; nutrition assessment and treatment; prescribed medical/clinical encounters, which, at a minimum, include the EPSDT periodicity schedule and immunizations for infants; and nursing management of a prenatal plan of care, with case management through pregnancy and for one year after delivery.

The program has been implemented through a statewide regional hospital and high-risk clinic system in all 13 health districts and 46 county health departments, comprising a total of about 131 clinic sites. Public funding comes from state appropriations, Medicaid, and the MCH Block Grant, with private funding from private companies and earned revenues. After four years, an evaluation has demonstrated the following benefits: more high-risk deliveries now occur in level II and III hospitals; and the proportion of very low-birthweight babies delivered in level III increased from 73 percent in 1986 to 81 percent in 1989. The mortality rate for the first month of life has continued to improve, especially among infants who weighed 500–1,499 grams at birth. In 1988, an independent cost-effectiveness evaluation determined that short-term savings in hospital costs were at least $1.5 million per year.

## Accessibility

South Carolina has worked progressively toward universal access to health services for pregnant women and infants. Since 1984, Medicaid eligibility has been expanded to 185 percent of poverty for pregnant women up to 60 days postpartum and infants up to age one; 133 percent for children between the ages of one and six; and 100 percent of poverty for children ages seven to nine. Older children are eligible at 50 percent of poverty. Prenatal, family planning, and children's health services are available in over 100 sites throughout the 46 counties. Arrangements with primary care centers in rural counties expand maternity services offered by county health departments.

Outreach specialists facilitate the program by identifying and assisting pregnant women and children who are eligible. The health department has hired 16 outreach specialists in 16 counties with Medicaid funds, and Medicaid eligibility workers have been "outstationed" in 42 clinic sites throughout South Carolina. These specialists aid pregnant women and children in overcoming barriers to obtaining prenatal and child health care.

Problems remain, however, in assuring access to care. Authority is split between three state agencies: HHSFC, which administers Medicaid claims; the social services department, which determines eligibility; and the health department, which delivers and monitors services. State mandates are frequently in conflict with county control and interpretation, and children older than age one continue to have difficulty in maintaining Medicaid eligibility. Physicians and nurses are not available in many areas of the state where services are most needed, and vacancies in state positions are common.

> **Outreach specialists facilitate the program by identifying and assisting pregnant women and children who are eligible. . . . These specialists aid pregnant women and children in overcoming barriers to obtaining prenatal and child health care.**

Private/public partnerships are being developed throughout South Carolina in an effort to provide each child with a medical home. Currently, pediatric task forces are functioning in four of the state's 13 health districts. The task forces review public and private resources, take into account their population in need, and work together to create a system to provide access to both preventive and sick care. The success of these task forces depends on a willingness on the part of the public agencies to be flexible, and on the private sector's feeling a sense of ownership for children without medical homes.

DHEC, HHSFC, and the University of South Carolina School of Medicine have established a cooperative effort to address the pediatric manpower shortage. The initiative, called South Carolina Access Network (SCAN), organizes a pool of physicians to supply contracted services in underserved areas, thereby giving relief to resident physicians and increasing access to care. Initiatives to improve access to health care for children are under way in Sumter, Ehrhardt, Laurens, Bennettsville, and Aiken.

## Comprehensiveness

Personal health services provided for infants and children (to age 21) in most MCH clinic sites in South Carolina include those listed below. In addition, more emphasis has been placed on home visiting, EPSDT services provided to Medicaid-eligible infants and children, early identification of children with disabilities, and care coordination services.

Services include the following:

- Well-child care
- Pediatric services

- Priority infant tracking—a system to identify those infants most at risk and to involve them in a health care system appropriate to need
- Medicaid postpartum/newborn home visits
- Lead screening
- Psychosocial services
- Short-term counseling, provided through special clinics
- Children's rehabilitative services (to age 18)
- Clinic services (physician, hospital, care coordination, and social work)
- Nutrition services and WIC
- Immunizations

EPSDT has been expanded dramatically since the 1989 OBRA. Currently, nurses conduct 50 percent of all screenings statewide in the public health clinics in the 13 health districts. The total number rose from 70,000 screenings in 1990 to almost 140,000 in 1992. EPSDT outreach nurses follow up on missed appointments and declinations of EPSDT services.

A comprehensive, coordinated, statewide multidisciplinary system of early intervention services for disabled or developmentally delayed infants and toddlers (ages birth through two), and their families has been developed in the context of federal and state planning efforts for P.L. 102-119. (See Glossary entry for P.L. 99-457.) In the fourth year of operation, South Carolina conducted evaluations, a program called Child Find, individual family services planning, and service coordination. Full services for all eligible infants and toddlers are scheduled for the fifth year.

In March 1989, as part of the Healthy Mothers–Healthy Futures Medicaid initiative, for which DHEC provided the match, HHSFC (Medicaid) and DHEC together developed an enhanced services package for newborns, including home visits, to make care more accessible for low-income families, to help establish a medical home, and to maintain continuity for the infant's health care. A postdischarge home visit by a registered nurse is made to all infants born to mothers on Medicaid. During this visit, the postpartum health of the mother is reviewed, the infant is weighed and examined, and, more importantly, the environment is assessed. In some health districts the case manager makes the postpartum/newborn home visit; in other instances, the home visitor communicates with the case manager.

Nurses conducting home visits have referred infants with jaundice, dehydration, severe thrush, poor weight gain, and even respiratory distress to physicians and emergency rooms for hospitalization. Mothers have been found with excessive postpartum bleeding and high blood pressure. Adverse housing conditions have been reported and dealt with. Several health department clinics report that their newborn and family planning visits have increased. In fiscal year 1992, 17,121 initial visits, 407 return, and 52 neonatal intensive care predischarge visits were made.

The preschool health appraisals program is funded by legislative appropriation to the department of education. The project targets school districts with more than 50 percent of enrolled students eligible for free or reduced-priced lunch. The purpose is to identify any health problems that might inhibit learning and to see that they are corrected before school entry. In 1992, this program provided comprehensive health appraisals to 2,570 children in 18 of the 50 school districts that qualified.

## Continuity/Coordination

South Carolina's county health departments recognize the challenges in maintaining continuity of care from the prenatal period onward. Systems for transferring prenatal care records from the health department clinic to the hospital, and for managing health needs of at-risk infants following discharge from a level II or III hospital, do not always function smoothly. A medical home for every infant and young child remains a stated goal. Expansion of case management is financed through Medicaid, which is permitting the option of targeted case management reimbursement for specified target populations. The federal reimbursement generated has allowed an increase in case management staff by 45 full-time equivalents over the past two years. Case management is now available in all 13 health districts to high- and low-risk pregnant women and infants, sickle-cell patients, and children with special health care needs. However, despite many improvements, a unified, coordinated system has not been implemented for risk screening, making referrals, or tracking children initially identified by different programs. Three pilot projects are stimulating the promotion of timely childhood immunizations These will be expanded statewide if early results indicate success.

## Quality Assurance

South Carolina's Division of Children's Health assesses program effectiveness in various ways. In fiscal year 1988, it developed a "standard visit cost" and implemented it statewide. This system allows districts to assess their health care needs in each area and to project the type of cost and number of services to be provided for children. In addition, each district must submit a plan for approval for the coming year, along with the projected number of services to be provided. County staff and central office staff monitor the plans throughout the year for effectiveness, and they conduct management reviews periodically.

A computerized management information system captures individual patient activity information statewide. A children's health services report form records each face-to-face encounter with a patient, documenting health status indicators, immunizations, home visit activities, nutrition and social work activities, and so forth. Routine reports determine such items as the immunization status of the population, the patient's age at admission to the program, and the average number of visits. Data are currently being linked with WIC and HRCP to produce monitoring and continuity reports.

The number of Medicaid-eligible children receiving EPSDT screenings is compared to the total number eligible to determine unmet need, and HHSFC staff audit the districts yearly concerning EPSDT. Perinatal regionalization surveillance data, based on vital statistics, are aggregated by perinatal regions and specific hospitals to include prenatal care (Kessner Index), births, birthweight-specific births and deaths, and expected vs. observed mortality. Summary data are developed and reviewed in an annual workshop and are distributed to all hospitals and meetings to promote awareness of and encourage improvement of state, regional, and specific hospital trends. Special emphasis is currently being placed on very low-birthweight births and deaths by level of hospital.

Because such a large number of the patients are Medicaid-eligible, an interagency committee negotiates quality assurance and compliance review standards for all contracts. Such standardization of expectations enhances service provision, maintains program integrity, and promotes quality care.

**South Carolina's county health departments recognize the challenges in maintaining continuity of care from the prenatal period onward.**

# National Center for Children in Poverty

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